

**PROVIDENCE ST. JOHN'S HEALTH CENTER  
PHASE II MASTER PLAN  
TRANSPORTATION IMPACT ANALYSIS  
APPENDIX C**

**SANTA MONICA, CALIFORNIA**

APRIL 2019

PREPARED FOR

**ESA | Environmental Science Associates**

PREPARED BY

**FEHR  PEERS**

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**



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**EXISTING CONDITIONS**

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	42.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.976

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	22	64	253	53	125	23	116	358	53	31	475	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	64	253	53	125	23	116	358	53	31	475	153
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	17	69	14	34	6	33	101	15	8	129	42
Total Analysis Volume [veh/h]	24	69	275	57	134	25	130	402	60	34	516	166
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	55	27	27	27	49	49	4	26	26
g / C, Green / Cycle	0.30	0.61	0.30	0.30	0.30	0.55	0.55	0.04	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.24	0.18	0.58	0.02	0.07	0.21	0.04	0.02	0.27	0.13
s, saturation flow rate [veh/h]	395	1536	327	1528	1810	1900	1497	1643	1900	1236
c, Capacity [veh/h]	170	930	151	463	547	1045	824	73	555	361
d1, Uniform Delay [s]	25.58	8.52	28.75	22.22	23.58	11.55	9.49	41.95	30.96	26.05
k, delay calibration	0.18	0.04	0.50	0.04	0.50	0.50	0.50	0.04	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	0.07	160.81	0.02	1.02	1.07	0.17	1.70	14.94	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

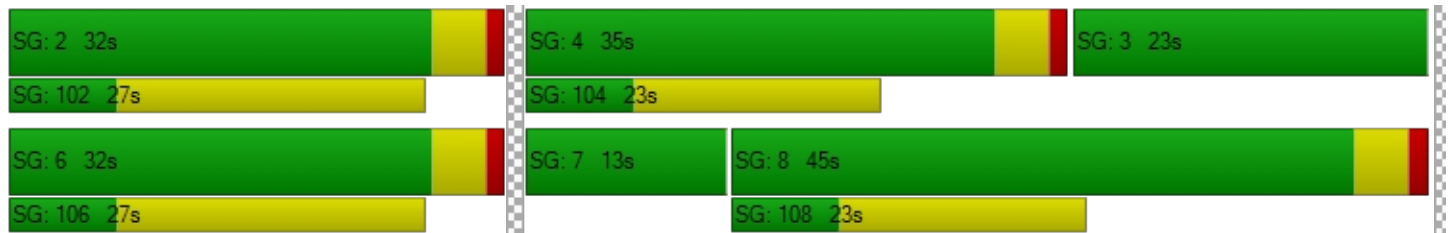
X, volume / capacity	0.55	0.30	1.26	0.05	0.24	0.38	0.07	0.46	0.93	0.46
d, Delay for Lane Group [s/veh]	30.05	8.59	189.56	22.24	24.60	12.62	9.66	43.65	45.90	26.39
Lane Group LOS	C	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.65	2.43	9.10	0.37	2.20	4.58	0.56	0.76	12.80	2.87
50th-Percentile Queue Length [ft]	41.34	60.70	227.46	9.14	54.89	114.59	14.07	19.09	319.96	71.87
95th-Percentile Queue Length [veh]	2.98	4.37	15.75	0.66	3.95	8.09	1.01	1.37	18.67	5.17
95th-Percentile Queue Length [ft]	74.40	109.26	393.65	16.45	98.79	202.37	25.33	34.37	466.63	129.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.05	30.05	8.59	189.56	189.56	22.24	24.60	12.62	9.66	43.65	45.90	26.39
Movement LOS	C	C	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	14.01			170.19			14.95			41.27		
Approach LOS	B			F			B			D		
d_I, Intersection Delay [s/veh]	42.45											
Intersection LOS	D											
Intersection V/C	0.976											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.397

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	13	563	172	168	715	50	149	230	223	50	365	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	563	172	168	715	50	149	230	223	50	365	27
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	148	45	43	182	13	40	62	60	13	98	7
Total Analysis Volume [veh/h]	14	593	181	171	730	51	159	246	239	54	393	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	37	37	48	48	48	32	32	32	20	20	20
g / C, Green / Cycle	0.41	0.41	0.41	0.54	0.54	0.54	0.36	0.36	0.36	0.23	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.02	0.16	0.12	0.17	0.20	0.03	0.13	0.13	0.16	0.05	0.11	0.11
s, saturation flow rate [veh/h]	726	3618	1501	1028	3618	1490	1239	1900	1538	1129	1900	1840
c, Capacity [veh/h]	280	1485	616	579	1948	802	464	683	553	197	427	414
d1, Uniform Delay [s]	24.13	18.70	17.78	11.31	12.01	9.92	20.84	21.23	21.88	37.98	30.46	30.51
k, delay calibration	0.50	0.50	0.50	0.36	0.50	0.50	0.18	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.80	1.21	0.94	0.55	0.15	0.74	0.12	0.20	0.28	0.33	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.40	0.29	0.30	0.37	0.06	0.34	0.36	0.43	0.27	0.50	0.51
d, Delay for Lane Group [s/veh]	24.47	19.51	18.99	12.25	12.56	10.08	21.58	21.35	22.08	38.26	30.79	30.87
Lane Group LOS	C	B	B	B	B	B	C	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.24	4.37	2.65	1.74	4.00	0.48	2.39	3.74	3.75	1.11	3.94	3.88
50th-Percentile Queue Length [ft]	6.10	109.20	66.15	43.57	100.06	11.97	59.65	93.40	93.72	27.73	98.46	96.93
95th-Percentile Queue Length [veh]	0.44	7.80	4.76	3.14	7.20	0.86	4.30	6.72	6.75	2.00	7.09	6.98
95th-Percentile Queue Length [ft]	10.98	194.89	119.08	78.42	180.10	21.55	107.38	168.11	168.69	49.92	177.24	174.48



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.47	19.51	18.99	12.25	12.56	10.08	21.58	21.35	22.08	38.26	30.83	30.87
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	19.48			12.37			21.68			31.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.64											
Intersection LOS	B											
Intersection V/C	0.397											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	12	93	70	67	124	55	120	608	85	21	597	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	93	70	67	124	55	120	608	85	21	597	55
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	28	21	21	39	17	31	159	22	6	160	15
Total Analysis Volume [veh/h]	14	111	83	85	157	70	125	634	89	22	639	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	57	50	50	57	46	46
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.64	0.55	0.55	0.64	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.07	0.06	0.07	0.14	0.13	0.19	0.20	0.03	0.19	0.19
s, saturation flow rate [veh/h]	1812	1490	1228	1672	932	1900	1743	849	1900	1809
c, Capacity [veh/h]	514	386	313	433	620	1050	963	568	972	926
d1, Uniform Delay [s]	26.43	26.15	31.76	28.58	7.16	11.18	11.30	6.70	13.18	13.25
k, delay calibration	0.04	0.04	0.04	0.04	0.08	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.10	0.17	0.37	0.12	0.93	1.08	0.13	1.06	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

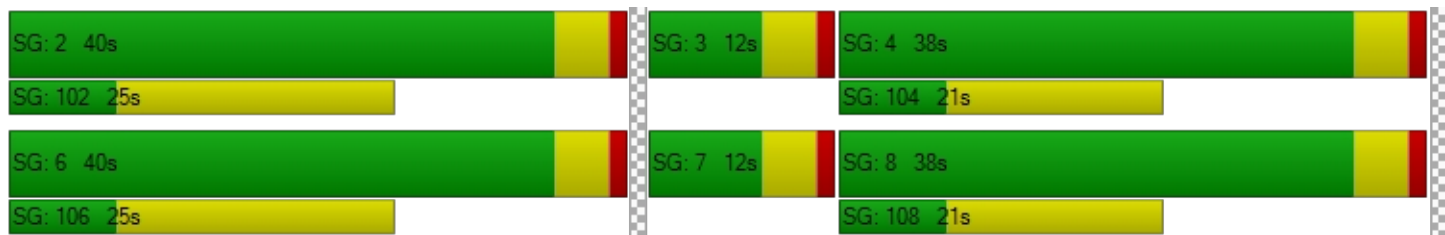
X, volume / capacity	0.24	0.22	0.27	0.52	0.20	0.35	0.37	0.04	0.36	0.37
d, Delay for Lane Group [s/veh]	26.52	26.25	31.93	28.94	7.28	12.11	12.38	6.83	14.24	14.39
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.07	1.37	1.58	4.09	0.85	4.06	3.96	0.16	4.33	4.25
50th-Percentile Queue Length [ft]	51.86	34.13	39.53	102.27	21.18	101.59	99.08	3.93	108.29	106.24
95th-Percentile Queue Length [veh]	3.73	2.46	2.85	7.36	1.52	7.31	7.13	0.28	7.74	7.63
95th-Percentile Queue Length [ft]	93.35	61.43	71.15	184.09	38.12	182.87	178.34	7.07	193.62	190.76

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.52	26.52	26.25	31.93	28.94	28.94	7.28	12.22	12.38	6.83	14.31	14.39
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.42			29.76			11.51			14.09		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.61											
Intersection LOS	B											
Intersection V/C	0.358											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	18	297	100	114	338	83	122	750	167	67	638	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	297	100	114	338	83	122	750	167	67	638	27
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	86	29	32	95	23	32	196	44	18	174	7
Total Analysis Volume [veh/h]	21	344	116	128	379	93	127	782	174	73	697	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	32	32	32	49	38	38	49	37	37
g / C, Green / Cycle	0.23	0.23	0.23	0.36	0.36	0.36	0.54	0.43	0.43	0.54	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.02	0.13	0.14	0.11	0.20	0.06	0.13	0.26	0.27	0.09	0.19	0.19
s, saturation flow rate [veh/h]	991	1900	1640	1199	1900	1507	943	1900	1735	808	1900	1865
c, Capacity [veh/h]	124	436	376	430	675	536	530	809	739	433	792	777
d1, Uniform Delay [s]	41.97	30.56	30.94	20.92	23.37	19.94	11.18	20.07	20.26	12.08	18.97	18.99
k, delay calibration	0.04	0.04	0.04	0.08	0.04	0.04	0.21	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.40	0.55	0.29	0.27	0.06	0.46	3.41	4.00	0.84	1.94	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.55	0.59	0.30	0.56	0.17	0.24	0.61	0.63	0.17	0.46	0.46
d, Delay for Lane Group [s/veh]	42.20	30.96	31.49	21.21	23.65	20.00	11.64	23.48	24.26	12.92	20.90	20.98
Lane Group LOS	D	C	C	C	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.46	4.49	4.27	1.86	6.31	1.32	1.24	8.42	8.07	0.75	5.74	5.67
50th-Percentile Queue Length [ft]	11.46	112.34	106.73	46.40	157.76	32.97	30.97	210.51	201.83	18.84	143.47	141.84
95th-Percentile Queue Length [veh]	0.83	7.97	7.66	3.34	10.43	2.37	2.23	13.18	12.73	1.36	9.67	9.58
95th-Percentile Queue Length [ft]	20.63	199.25	191.44	83.53	260.76	59.35	55.75	329.48	318.33	33.91	241.69	239.51

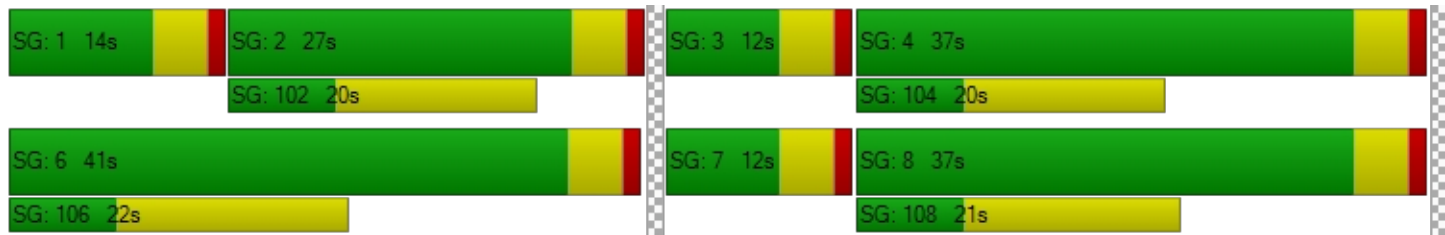


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.20	31.12	31.49	21.21	23.65	20.00	11.64	23.77	24.26	12.92	20.94	20.98
Movement LOS	D	C	C	C	C	B	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	31.70			22.56			22.42			20.21		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.36											
Intersection LOS	C											
Intersection V/C	0.488											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.566

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	45	232	130	154	278	38	94	975	183	19	787	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	232	130	154	278	38	94	975	183	19	787	40
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	59	33	43	77	11	25	259	49	5	217	11
Total Analysis Volume [veh/h]	46	235	132	170	308	42	100	1037	195	21	867	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	7	34	34	6	47	47	36	36	36
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.07	0.52	0.52	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.04	0.12	0.09	0.09	0.16	0.03	0.06	0.33	0.35	0.05	0.24	0.24
s, saturation flow rate [veh/h]	1040	1900	1430	1810	1900	1486	1810	1900	1726	459	1900	1851
c, Capacity [veh/h]	188	469	353	149	722	565	129	983	893	133	751	732
d1, Uniform Delay [s]	37.87	29.16	28.15	41.31	20.64	17.80	41.10	15.69	16.08	36.95	21.72	21.78
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.31	0.24	69.54	0.15	0.02	3.71	3.21	4.03	2.53	3.70	3.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	0.50	0.37	1.14	0.43	0.07	0.77	0.64	0.67	0.16	0.61	0.62
d, Delay for Lane Group [s/veh]	38.12	29.47	28.40	110.85	20.79	17.82	44.82	18.90	20.11	39.48	25.42	25.66
Lane Group LOS	D	C	C	F	C	B	D	B	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.94	4.26	2.31	6.11	4.58	0.54	2.29	9.55	9.47	0.52	8.19	8.10
50th-Percentile Queue Length [ft]	23.55	106.40	57.75	152.79	114.53	13.46	57.17	238.81	236.85	12.92	204.71	202.53
95th-Percentile Queue Length [veh]	1.70	7.64	4.16	10.61	8.09	0.97	4.12	14.62	14.52	0.93	12.88	12.77
95th-Percentile Queue Length [ft]	42.39	190.98	103.95	265.13	202.29	24.23	102.90	365.53	363.04	23.26	322.03	319.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.12	29.47	28.40	110.85	20.79	17.82	44.82	19.37	20.11	39.48	25.53	25.66
Movement LOS	D	C	C	F	C	B	D	B	C	D	C	C
d_A, Approach Delay [s/veh]	30.09			49.99			21.39			25.85		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.47											
Intersection LOS	C											
Intersection V/C	0.566											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			┌			┌┌┌			┌┌┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	48	54	66	67	42	62	1241	116	16	1023	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	48	54	66	67	42	62	1241	116	16	1023	6
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	16	17	18	23	15	17	332	31	4	270	2
Total Analysis Volume [veh/h]	7	62	70	70	93	58	66	1329	124	17	1081	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	6	50	50	2	47	47
g / C, Green / Cycle	0.26	0.26	0.06	0.55	0.55	0.03	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.08	0.25	0.04	0.39	0.39	0.01	0.29	0.29
s, saturation flow rate [veh/h]	1689	600	1810	1900	1824	1810	1900	1894
c, Capacity [veh/h]	447	159	115	1053	1011	51	985	982
d1, Uniform Delay [s]	26.39	32.51	40.97	14.59	14.77	42.91	14.61	14.62
k, delay calibration	0.04	0.22	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	36.35	1.69	3.83	4.25	1.43	2.23	2.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.95	0.58	0.70	0.71	0.34	0.55	0.55
d, Delay for Lane Group [s/veh]	26.53	68.86	42.66	18.42	19.03	44.34	16.84	16.86
Lane Group LOS	C	E	D	B	B	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.24	4.73	1.46	10.99	10.99	0.39	7.58	7.57
50th-Percentile Queue Length [ft]	55.90	118.27	36.52	274.78	274.66	9.70	189.50	189.29
95th-Percentile Queue Length [veh]	4.02	8.30	2.63	16.43	16.42	0.70	12.10	12.08
95th-Percentile Queue Length [ft]	100.62	207.44	65.73	410.71	410.56	17.45	302.38	302.10



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	26.53	26.53	0.00	68.86	68.86	42.66	18.69	19.03	44.34	16.85	16.86
Movement LOS		C	C		E	E	D	B	B	D	B	B
d_A, Approach Delay [s/veh]	26.53			68.86			19.76			17.27		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	21.67											
Intersection LOS	C											
Intersection V/C	0.655											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	65.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.886

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	551	300	776	289	809	0	0	1233	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	551	300	776	289	809	0	0	1233	38
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	141	77	198	75	210	0	0	318	10
Total Analysis Volume [veh/h]	0	0	0	562	306	792	300	840	0	0	1273	39
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	17	50	29	29
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.18	0.56	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.48	0.23	0.28	0.44	0.17	0.23	0.24	0.24
s, saturation flow rate [veh/h]	900	1872	1438	900	1810	3618	3618	1857
c, Capacity [veh/h]	304	632	486	304	335	2026	1172	602
d1, Uniform Delay [s]	29.80	25.76	27.23	29.80	35.84	11.35	27.12	26.90
k, delay calibration	0.50	0.17	0.27	0.50	0.23	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	205.2	2.11	8.07	158.1	16.19	0.63	4.35	7.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

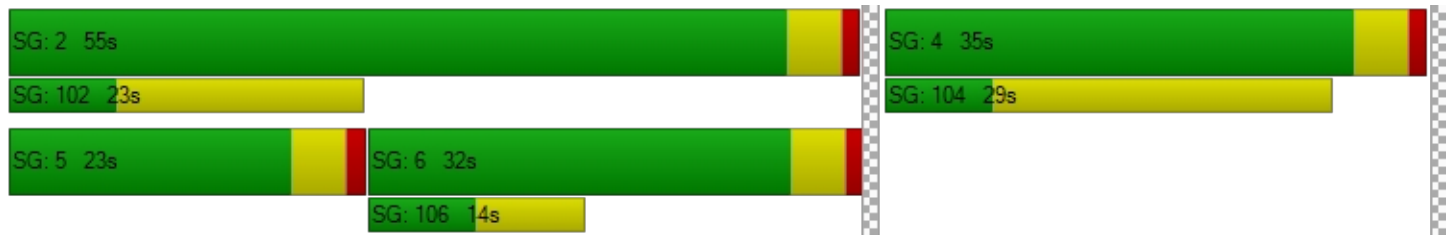
X, volume / capacity	1.42	0.69	0.82	1.30	0.90	0.41	0.75	0.73
d, Delay for Lane Group [s/veh]	235.0	27.86	35.29	187.9	52.03	11.97	31.47	34.41
Lane Group LOS	F	C	D	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	23.30	7.79	8.19	19.32	7.80	4.62	8.79	9.27
50th-Percentile Queue Length [ft]	582.4	194.7	204.6	482.9	194.89	115.40	219.81	231.83
95th-Percentile Queue Length [veh]	37.42	12.37	12.88	30.67	12.37	8.14	13.66	14.27
95th-Percentile Queue Length [ft]	935.4	309.2	321.9	766.6	309.36	203.48	341.38	356.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	180.17	27.86	115.27	52.03	11.97	0.00	0.00	32.39	34.41
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			121.52			22.52			32.45		
Approach LOS	A			F			C			C		
d_I, Intersection Delay [s/veh]	65.65											
Intersection LOS	E											
Intersection V/C	0.886											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤵⤴						⤵⤴			⤵⤴		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	159	293	279	0	0	0	0	938	741	813	978	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	293	279	0	0	0	0	938	741	813	978	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	94	89	0	0	0	0	254	201	218	263	0
Total Analysis Volume [veh/h]	204	375	357	0	0	0	0	1017	803	873	1051	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23		30	30	30	23	58
g / C, Green / Cycle	0.25	0.25	0.25		0.34	0.34	0.34	0.26	0.64
(v / s)_j Volume / Saturation Flow Rate	0.16	0.16	0.23		0.25	0.30	0.30	0.25	0.29
s, saturation flow rate [veh/h]	1837	1729	1566		3618	1505	1505	3514	3618
c, Capacity [veh/h]	466	439	397		1219	507	507	900	2330
d1, Uniform Delay [s]	29.94	29.94	32.49		26.45	28.38	28.38	33.18	8.04
k, delay calibration	0.04	0.04	0.06		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.58	4.21		0.35	2.36	2.36	23.66	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.64	0.90		0.75	0.90	0.90	0.97	0.45
d, Delay for Lane Group [s/veh]	30.49	30.52	36.69		26.80	30.74	30.74	56.84	8.68
Lane Group LOS	C	C	D		C	C	C	E	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	5.61	5.29	7.66		8.25	9.12	9.12	12.08	4.66
50th-Percentile Queue Length [ft]	140.31	132.15	191.51		206.30	228.07	228.07	302.05	116.43
95th-Percentile Queue Length [veh]	9.50	9.06	12.20		12.96	14.08	14.08	17.78	8.20
95th-Percentile Queue Length [ft]	237.45	226.41	304.99		324.08	351.91	351.91	444.56	204.91

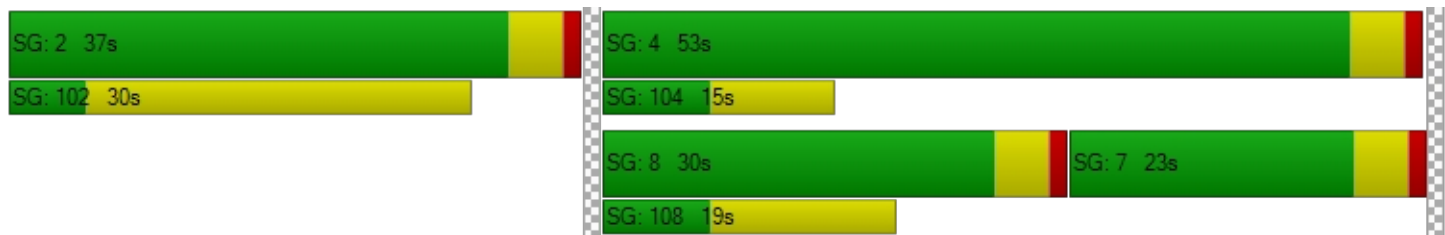


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.49	30.52	36.69	0.00	0.00	0.00	0.00	26.80	30.74	56.84	8.68	0.00
Movement LOS	C	C	D					C	C	E	A	
d_A, Approach Delay [s/veh]	32.87			0.00			28.77			30.53		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	30.31											
Intersection LOS	C											
Intersection V/C	0.779											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	48.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	159	533	137	182	470	71	98	1179	95	52	829	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	159	533	137	182	470	71	98	1179	95	52	829	91
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	136	35	53	137	21	27	330	27	15	242	27
Total Analysis Volume [veh/h]	162	543	139	211	546	82	110	1320	106	61	969	106
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	36	36	14	38	38	9	46	46	5	42	42
g / C, Green / Cycle	0.10	0.30	0.30	0.12	0.32	0.32	0.07	0.38	0.38	0.04	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.09	0.29	0.09	0.12	0.17	0.17	0.06	0.36	0.07	0.03	0.27	0.07
s, saturation flow rate [veh/h]	1810	1900	1568	1810	1900	1799	1810	3618	1562	1810	3618	1569
c, Capacity [veh/h]	190	573	473	218	603	571	136	1382	597	79	1270	551
d1, Uniform Delay [s]	52.82	40.96	32.10	52.54	33.64	33.70	54.69	36.08	24.59	56.79	34.54	27.12
k, delay calibration	0.04	0.37	0.11	0.34	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.16	21.75	0.34	42.29	0.73	0.79	4.33	15.60	0.65	5.73	4.39	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

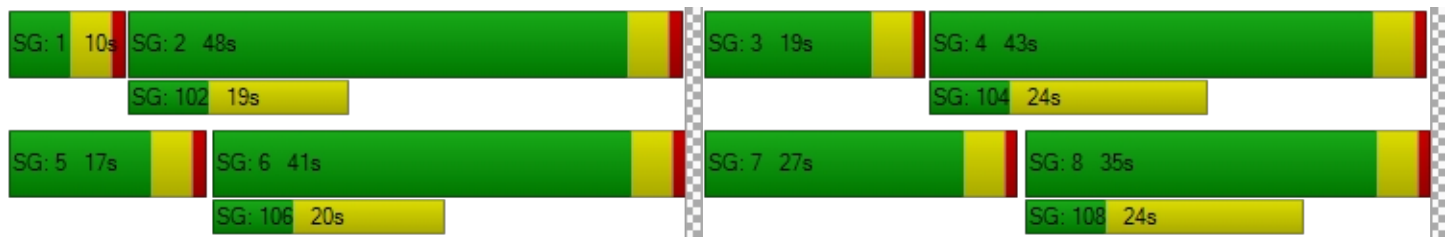
X, volume / capacity	0.85	0.95	0.29	0.97	0.53	0.54	0.81	0.95	0.18	0.77	0.76	0.19
d, Delay for Lane Group [s/veh]	56.98	62.71	32.44	94.83	34.37	34.49	59.02	51.69	25.24	62.52	38.92	27.89
Lane Group LOS	E	E	C	F	C	C	E	D	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.98	18.80	3.12	8.82	7.71	7.39	3.41	21.17	2.10	1.94	13.03	2.22
50th-Percentile Queue Length [ft]	124.41	469.99	78.03	220.57	192.77	184.80	85.28	529.13	52.40	48.56	325.82	55.62
95th-Percentile Queue Length [veh]	8.63	25.91	5.62	13.69	12.26	11.85	6.14	28.71	3.77	3.50	18.95	4.00
95th-Percentile Queue Length [ft]	215.87	647.76	140.45	342.35	306.62	296.27	153.51	717.75	94.32	87.42	473.83	100.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.98	62.71	32.44	94.83	34.42	34.49	59.02	51.69	25.24	62.52	38.92	27.89
Movement LOS	E	E	C	F	C	C	E	D	C	E	D	C
d_A, Approach Delay [s/veh]	56.63			49.62			50.38			39.16		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	48.52											
Intersection LOS	D											
Intersection V/C	0.801											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	35	483	58	89	462	36	52	411	104	75	444	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	483	58	89	462	36	52	411	104	75	444	33
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	128	15	24	124	10	15	123	31	21	121	9
Total Analysis Volume [veh/h]	37	513	62	96	497	39	62	490	124	82	486	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.04	0.15	0.16	0.11	0.14	0.14	0.07	0.26	0.08	0.09	0.28
s, saturation flow rate [veh/h]	881	1900	1816	848	1900	1845	893	1900	1569	919	1873
c, Capacity [veh/h]	452	988	944	431	988	960	179	694	573	204	684
d1, Uniform Delay [s]	14.50	10.89	10.92	16.10	10.75	10.76	34.85	21.73	17.51	33.69	22.36
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.76	0.81	1.19	0.69	0.71	0.43	0.99	0.07	0.47	2.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.30	0.30	0.22	0.27	0.28	0.35	0.71	0.22	0.40	0.76
d, Delay for Lane Group [s/veh]	14.85	11.66	11.73	17.29	11.44	11.48	35.27	22.72	17.58	34.17	24.36
Lane Group LOS	B	B	B	B	B	B	D	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.44	2.90	2.82	1.27	2.65	2.60	1.15	7.45	1.49	1.50	8.34
50th-Percentile Queue Length [ft]	10.97	72.41	70.48	31.69	66.21	64.95	28.68	186.36	37.31	37.48	208.57
95th-Percentile Queue Length [veh]	0.79	5.21	5.07	2.28	4.77	4.68	2.06	11.93	2.69	2.70	13.08
95th-Percentile Queue Length [ft]	19.75	130.35	126.87	57.03	119.18	116.91	51.62	298.30	67.15	67.47	326.99



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.85	11.69	11.73	17.29	11.46	11.48	35.27	22.72	17.58	34.17	24.36	24.36
Movement LOS	B	B	B	B	B	B	D	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.88			12.34			22.93			25.69		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.26											
Intersection LOS	B											
Intersection V/C	0.434											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	178	525	20	35	570	66	61	469	50	58	260	127
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	178	525	20	35	570	66	61	469	50	58	260	127
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	147	6	10	155	18	18	135	14	16	71	35
Total Analysis Volume [veh/h]	199	587	22	38	622	72	70	540	58	63	283	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	36	36	36	36	36
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.40	0.40	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.26	0.16	0.16	0.05	0.19	0.19	0.06	0.32	0.08	0.15	0.09
s, saturation flow rate [veh/h]	762	1900	1872	825	1900	1817	1110	1860	833	1900	1573
c, Capacity [veh/h]	349	945	931	388	945	904	389	745	164	761	630
d1, Uniform Delay [s]	25.45	13.56	13.57	18.54	13.97	14.00	25.02	23.83	39.33	19.00	17.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.20	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.60	0.91	0.93	0.50	1.13	1.20	0.08	3.76	0.55	0.11	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

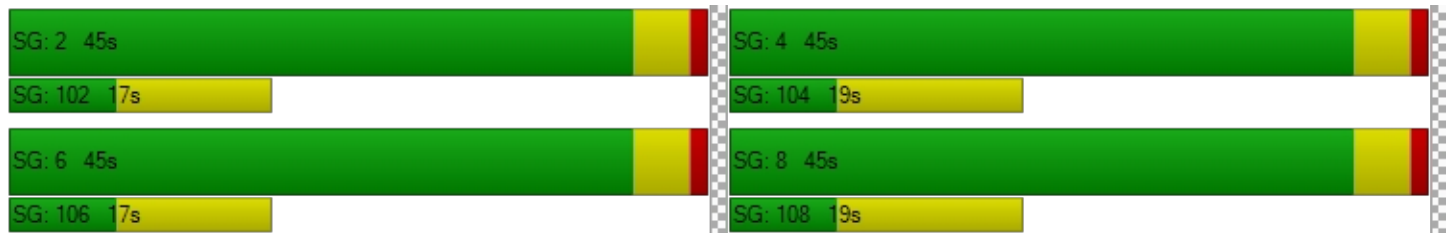
X, volume / capacity	0.57	0.32	0.33	0.10	0.37	0.38	0.18	0.80	0.38	0.37	0.22
d, Delay for Lane Group [s/veh]	32.05	14.47	14.50	19.04	15.10	15.21	25.11	27.59	39.87	19.11	17.79
Lane Group LOS	C	B	B	B	B	B	C	C	D	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	4.15	3.69	3.65	0.55	4.39	4.27	1.13	11.26	1.35	3.98	1.81
50th-Percentile Queue Length [ft]	103.76	92.19	91.20	13.85	109.73	106.63	28.15	281.50	33.64	99.47	45.26
95th-Percentile Queue Length [veh]	7.47	6.64	6.57	1.00	7.83	7.65	2.03	16.76	2.42	7.16	3.26
95th-Percentile Queue Length [ft]	186.76	165.95	164.16	24.93	195.63	191.30	50.67	419.08	60.55	179.04	81.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.05	14.49	14.50	19.04	15.15	15.21	25.11	27.59	27.59	39.87	19.11	17.79
Movement LOS	C	B	B	B	B	B	C	C	C	D	B	B
d_A, Approach Delay [s/veh]	18.81			15.36			27.33			21.44		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.46											
Intersection LOS	C											
Intersection V/C	0.583											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	39	495	46	60	428	43	54	93	64	35	129	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	495	46	60	428	43	54	93	64	35	129	44
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	134	12	18	127	13	15	26	18	11	39	13
Total Analysis Volume [veh/h]	42	536	50	71	506	51	61	106	73	42	156	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.05	0.32	0.08	0.30	0.15	0.11	0.03
s, saturation flow rate [veh/h]	866	1849	843	1843	1591	1755	1523
c, Capacity [veh/h]	237	775	219	772	756	823	651
d1, Uniform Delay [s]	23.57	14.84	25.52	14.52	11.39	10.98	10.19
k, delay calibration	0.04	0.12	0.04	0.09	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	1.66	0.32	1.11	1.10	0.69	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.76	0.32	0.72	0.32	0.24	0.08
d, Delay for Lane Group [s/veh]	23.71	16.50	25.84	15.63	12.49	11.67	10.44
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.52	6.21	0.94	5.68	2.08	1.63	0.41
50th-Percentile Queue Length [ft]	12.96	155.18	23.44	142.01	51.96	40.67	10.23
95th-Percentile Queue Length [veh]	0.93	10.29	1.69	9.59	3.74	2.93	0.74
95th-Percentile Queue Length [ft]	23.32	257.33	42.19	239.72	93.53	73.21	18.41

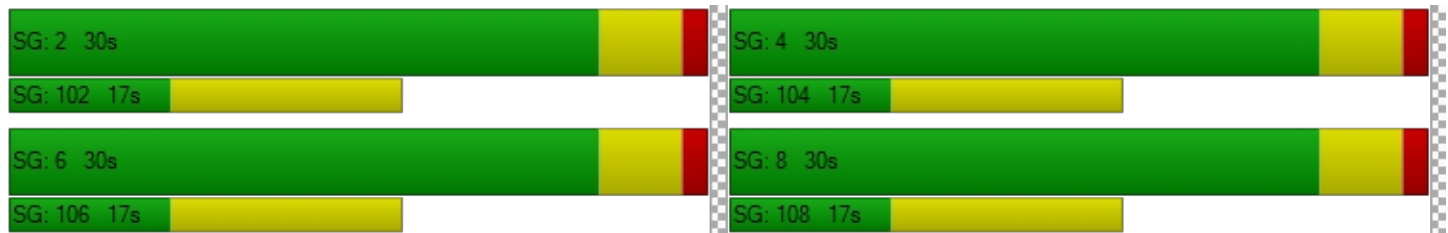


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.71	16.50	16.50	25.84	15.63	15.63	12.49	12.49	12.49	11.67	11.67	10.44
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.98			16.78			12.49			11.41		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.49											
Intersection LOS	B											
Intersection V/C	0.468											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	37	821	65	69	788	50	51	258	113	117	328	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	821	65	69	788	50	51	258	113	117	328	37
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	216	17	18	204	13	16	79	35	31	88	10
Total Analysis Volume [veh/h]	39	865	68	72	817	52	62	315	138	125	351	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.25	0.12	0.23	0.23	0.06	0.17	0.09	0.12	0.18	0.03
s, saturation flow rate [veh/h]	641	1900	1837	607	1900	1837	1035	1900	1533	1064	1900	1551
c, Capacity [veh/h]	356	1072	1036	334	1072	1036	228	609	492	253	609	498
d1, Uniform Delay [s]	14.59	10.10	10.13	16.21	9.87	9.91	31.93	22.11	20.27	32.52	22.63	18.94
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	1.32	1.38	1.47	1.16	1.23	0.24	0.25	0.11	0.56	0.32	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

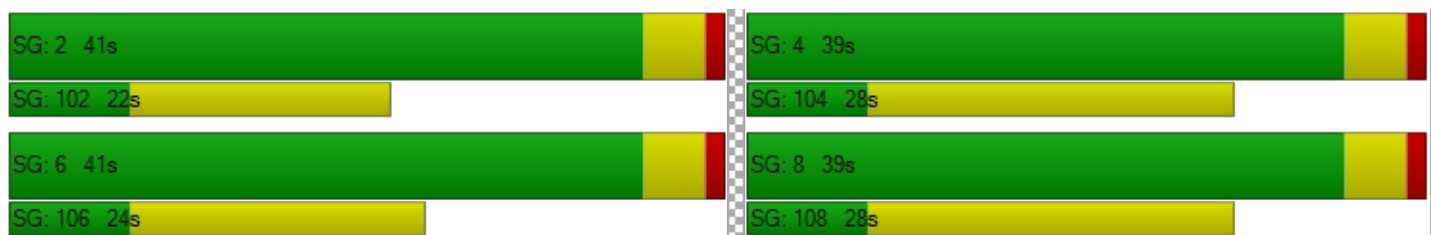
X, volume / capacity	0.11	0.44	0.44	0.22	0.41	0.41	0.27	0.52	0.28	0.49	0.58	0.08
d, Delay for Lane Group [s/veh]	15.22	11.42	11.51	17.68	11.03	11.14	32.16	22.37	20.39	33.08	22.95	18.96
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.47	4.53	4.44	0.97	4.11	4.05	1.09	4.65	1.86	2.33	5.40	0.51
50th-Percentile Queue Length [ft]	11.83	113.33	111.11	24.21	102.64	101.22	27.33	116.17	46.62	58.16	135.02	12.83
95th-Percentile Queue Length [veh]	0.85	8.02	7.90	1.74	7.39	7.29	1.97	8.18	3.36	4.19	9.21	0.92
95th-Percentile Queue Length [ft]	21.29	200.62	197.54	43.58	184.75	182.19	49.19	204.55	83.91	104.70	230.31	23.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.22	11.46	11.51	17.68	11.08	11.14	32.16	22.37	20.39	33.08	22.95	18.96
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	11.62			11.59			23.02			25.09		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.96											
Intersection LOS	B											
Intersection V/C	0.435											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	15	115	102	36	95	48	32	360	88	23	443	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	115	102	36	95	48	32	360	88	23	443	15
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	33	29	9	24	12	9	99	24	6	122	4
Total Analysis Volume [veh/h]	17	131	116	37	98	49	35	396	97	25	490	17
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	54	54	54	54	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.67	0.67	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.16	0.09	0.03	0.04	0.21	0.06	0.02	0.26	0.01
s, saturation flow rate [veh/h]	1667	1435	1576	919	1900	1559	1001	1900	1545
c, Capacity [veh/h]	406	366	339	567	1273	1044	638	1273	1035
d1, Uniform Delay [s]	29.15	26.46	25.37	9.59	5.49	4.64	8.38	5.86	4.40
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	0.62	0.19	0.21	0.64	0.18	0.12	0.88	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.65	0.37	0.14	0.06	0.31	0.09	0.04	0.39	0.02
d, Delay for Lane Group [s/veh]	30.90	27.08	25.57	9.80	6.13	4.81	8.50	6.74	4.43
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.68	2.14	0.74	0.32	2.45	0.51	0.20	3.24	0.08
50th-Percentile Queue Length [ft]	116.96	53.56	18.55	7.90	61.17	12.76	5.10	81.10	2.12
95th-Percentile Queue Length [veh]	8.23	3.86	1.34	0.57	4.40	0.92	0.37	5.84	0.15
95th-Percentile Queue Length [ft]	205.64	96.41	33.38	14.22	110.11	22.97	9.17	145.99	3.81

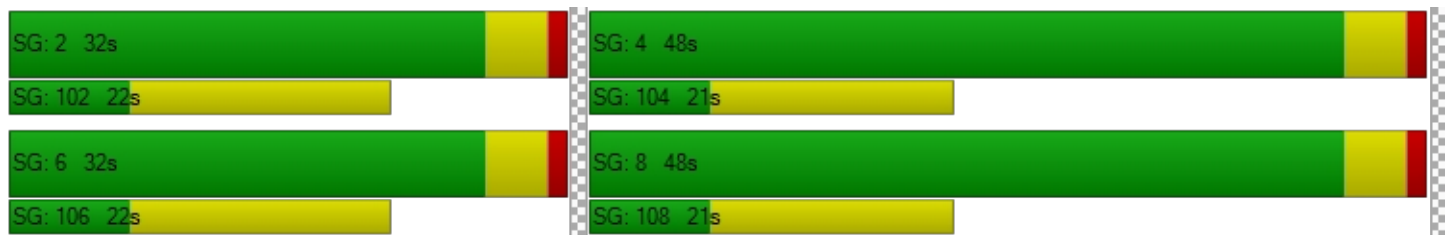


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.90	30.90	30.90	27.08	27.08	25.57	9.80	6.13	4.81	8.50	6.74	4.43
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.90			26.68			6.13			6.75		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	13.19											
Intersection LOS	B											
Intersection V/C	0.416											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	29	604	45	68	593	60	40	392	71	92	434	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	604	45	68	593	60	40	392	71	92	434	37
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	157	12	18	155	16	11	104	19	25	116	10
Total Analysis Volume [veh/h]	30	627	47	71	622	63	43	418	76	98	463	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	27	27	27	27	27	27
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.04	0.18	0.18	0.09	0.18	0.18	0.05	0.22	0.05	0.10	0.24	0.02
s, saturation flow rate [veh/h]	766	1900	1844	774	1900	1828	942	1900	1570	981	1900	1576
c, Capacity [veh/h]	411	1032	1001	416	1032	993	184	650	537	214	650	539
d1, Uniform Delay [s]	14.08	10.18	10.19	14.76	10.22	10.24	33.92	22.20	18.20	33.87	22.90	17.76
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.13	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.86	0.89	0.89	0.88	0.93	0.24	0.76	0.04	0.57	1.76	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.33	0.33	0.17	0.34	0.34	0.23	0.64	0.14	0.46	0.71	0.07
d, Delay for Lane Group [s/veh]	14.42	11.04	11.09	15.65	11.11	11.17	34.16	22.96	18.24	34.44	24.66	17.78
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.35	3.26	3.20	0.88	3.34	3.26	0.78	6.44	0.95	1.83	7.51	0.47
50th-Percentile Queue Length [ft]	8.81	81.45	79.94	22.04	83.52	81.38	19.59	160.92	23.64	45.85	187.85	11.83
95th-Percentile Queue Length [veh]	0.63	5.86	5.76	1.59	6.01	5.86	1.41	10.60	1.70	3.30	12.01	0.85
95th-Percentile Queue Length [ft]	15.85	146.61	143.89	39.67	150.33	146.48	35.27	264.94	42.54	82.53	300.24	21.29

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.42	11.06	11.09	15.65	11.13	11.17	34.16	22.96	18.24	34.44	24.66	17.78
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.20			11.56			23.19			25.81		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.16											
Intersection LOS	B											
Intersection V/C	0.428											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	32	390	82	54	311	56	74	397	146	72	426	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	390	82	54	311	56	74	397	146	72	426	34
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	108	23	15	86	15	21	111	41	19	113	9
Total Analysis Volume [veh/h]	36	433	91	60	343	62	83	443	163	76	452	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	36	25	25	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.23	0.06	0.06	0.18	0.04	0.09	0.23	0.11	0.08	0.24	0.02
s, saturation flow rate [veh/h]	1050	1900	1553	968	1900	1552	945	1900	1524	952	1900	1539
c, Capacity [veh/h]	502	966	790	436	966	789	219	685	549	225	685	554
d1, Uniform Delay [s]	13.94	10.96	8.99	16.06	10.33	8.82	29.55	18.68	16.04	28.94	18.79	14.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	1.51	0.30	0.66	1.02	0.19	0.40	0.39	0.11	0.33	0.45	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.45	0.12	0.14	0.36	0.08	0.38	0.65	0.30	0.34	0.66	0.06
d, Delay for Lane Group [s/veh]	14.22	12.47	9.29	16.72	11.35	9.01	29.95	19.06	16.15	29.27	19.24	14.68
Lane Group LOS	B	B	A	B	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.37	4.02	0.69	0.70	2.97	0.46	1.32	5.60	1.76	1.18	5.76	0.36
50th-Percentile Queue Length [ft]	9.30	100.40	17.19	17.40	74.26	11.46	32.89	139.96	44.07	29.60	143.96	8.88
95th-Percentile Queue Length [veh]	0.67	7.23	1.24	1.25	5.35	0.83	2.37	9.48	3.17	2.13	9.69	0.64
95th-Percentile Queue Length [ft]	16.73	180.72	30.95	31.33	133.66	20.63	59.20	236.97	79.32	53.27	242.34	15.99

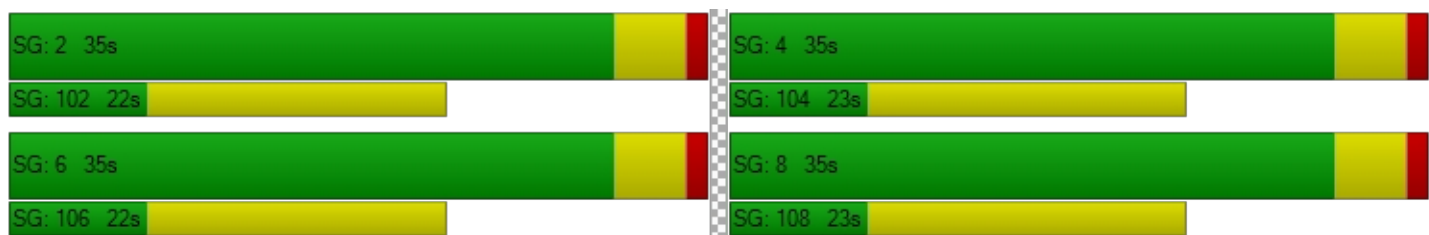


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.22	12.47	9.29	16.72	11.35	9.01	29.95	19.06	16.15	29.27	19.24	14.68
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.06			11.73			19.68			20.30		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.34											
Intersection LOS	B											
Intersection V/C	0.466											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	87	228	11	68	345	78	69	558	124	141	320	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	228	11	68	345	78	69	558	124	141	320	79
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	66	3	21	105	24	19	155	35	37	83	20
Total Analysis Volume [veh/h]	100	263	13	83	422	95	77	621	138	146	332	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	34	34	34	34	34	34
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.11	0.07	0.07	0.07	0.14	0.14	0.07	0.33	0.09	0.18	0.17	0.05
s, saturation flow rate [veh/h]	896	1900	1864	1116	1900	1764	1057	1900	1570	812	1900	1572
c, Capacity [veh/h]	319	715	702	433	715	664	475	924	764	275	924	765
d1, Uniform Delay [s]	22.65	14.68	14.69	18.73	15.82	15.87	15.86	13.71	10.12	26.49	11.18	9.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.13	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.60	0.62	0.98	1.48	1.64	0.06	1.06	0.04	0.59	0.09	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

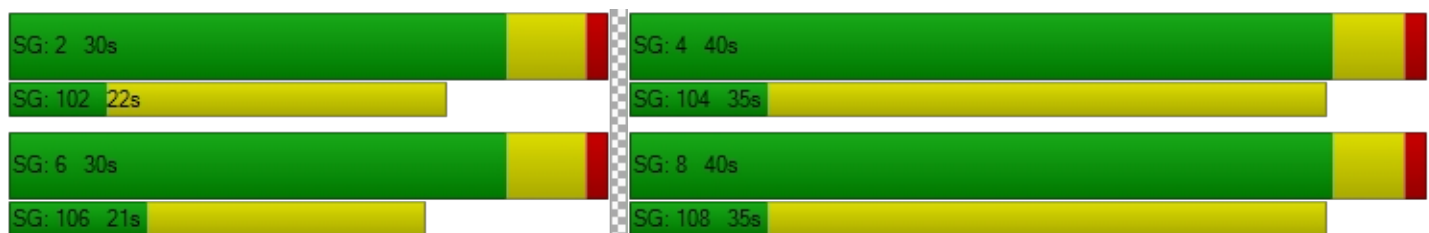
X, volume / capacity	0.31	0.19	0.20	0.19	0.37	0.38	0.16	0.67	0.18	0.53	0.36	0.11
d, Delay for Lane Group [s/veh]	25.19	15.29	15.32	19.72	17.30	17.51	15.92	14.77	10.16	27.08	11.27	9.76
Lane Group LOS	C	B	B	B	B	B	B	B	B	C	B	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.71	1.70	1.69	1.02	2.93	2.80	0.82	6.85	1.09	2.26	2.89	0.62
50th-Percentile Queue Length [ft]	42.72	42.50	42.15	25.58	73.24	70.10	20.43	171.20	27.18	56.59	72.25	15.54
95th-Percentile Queue Length [veh]	3.08	3.06	3.03	1.84	5.27	5.05	1.47	11.14	1.96	4.07	5.20	1.12
95th-Percentile Queue Length [ft]	76.90	76.50	75.87	46.05	131.83	126.19	36.78	278.49	48.93	101.85	130.05	27.97

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.19	15.30	15.32	19.72	17.38	17.51	15.92	14.77	10.16	27.08	11.27	9.76
Movement LOS	C	B	B	B	B	B	B	B	B	C	B	A
d_A, Approach Delay [s/veh]	17.93			17.73			14.12			15.17		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.88											
Intersection LOS	B											
Intersection V/C	0.469											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	14	519	56	42	439	22	62	63	42	19	69	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	519	56	42	439	22	62	63	42	19	69	29
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	154	17	12	127	6	17	17	11	6	21	9
Total Analysis Volume [veh/h]	17	617	67	48	506	25	67	68	45	23	83	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	32	32	32	32	32	32	32
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	16	16	7	7
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.02	0.37	0.06	0.27	0.02	0.11	0.08
s, saturation flow rate [veh/h]	894	1856	759	1900	1521	1662	1755
c, Capacity [veh/h]	455	920	334	942	754	514	510
d1, Uniform Delay [s]	8.99	6.42	12.52	5.53	4.12	10.90	10.65
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.45	0.07	0.18	0.01	0.15	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.04	0.74	0.14	0.54	0.03	0.35	0.28
d, Delay for Lane Group [s/veh]	9.00	6.88	12.59	5.71	4.13	11.05	10.76
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.07	1.81	0.25	1.13	0.04	0.79	0.60
50th-Percentile Queue Length [ft]	1.63	45.27	6.18	28.14	1.03	19.77	15.10
95th-Percentile Queue Length [veh]	0.12	3.26	0.44	2.03	0.07	1.42	1.09
95th-Percentile Queue Length [ft]	2.94	81.48	11.12	50.65	1.85	35.58	27.19

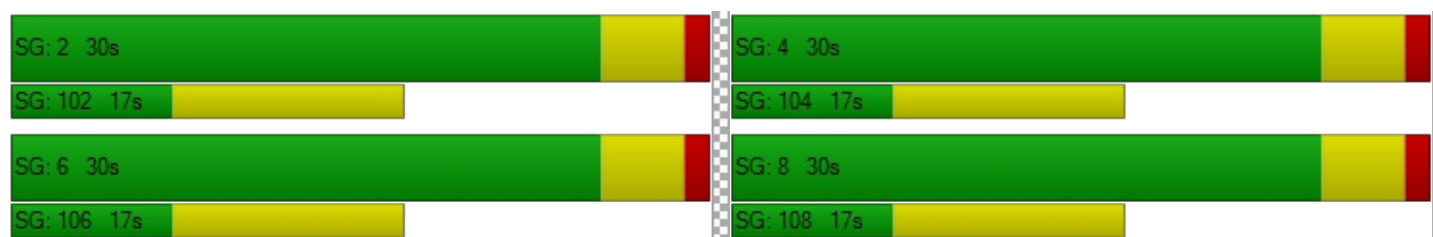


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.00	6.88	6.88	12.59	5.71	4.13	11.05	11.05	11.05	10.76	10.76	10.76
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	6.93			6.21			11.05			10.76		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.47											
Intersection LOS	A											
Intersection V/C	0.477											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.507

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	28	904	72	55	889	40	68	220	90	83	317	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	904	72	55	889	40	68	220	90	83	317	39
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	249	20	14	231	10	20	63	26	24	90	11
Total Analysis Volume [veh/h]	31	998	79	57	925	42	78	254	104	95	361	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.05	0.29	0.29	0.11	0.26	0.26	0.08	0.20	0.09	0.22
s, saturation flow rate [veh/h]	589	1900	1845	532	1900	1859	981	1764	1014	1851
c, Capacity [veh/h]	310	1046	1015	275	1046	1023	207	590	228	619
d1, Uniform Delay [s]	16.59	11.33	11.35	19.05	10.86	10.89	33.71	22.22	32.93	22.67
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	1.86	1.93	1.70	1.49	1.54	0.42	0.38	0.45	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

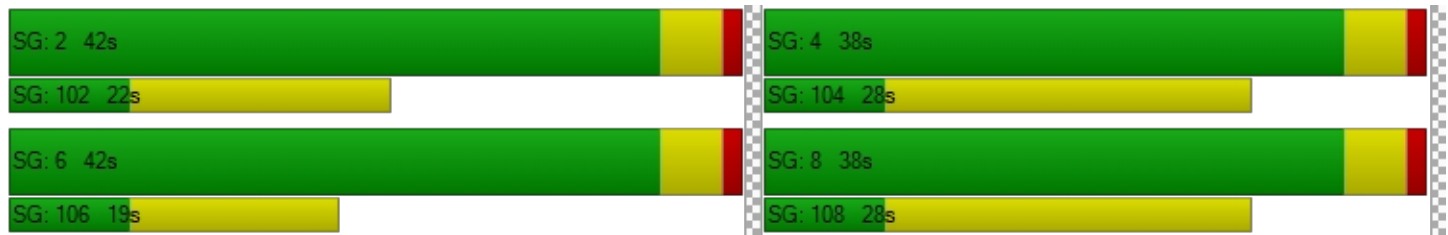
X, volume / capacity	0.10	0.52	0.52	0.21	0.47	0.47	0.38	0.61	0.42	0.65
d, Delay for Lane Group [s/veh]	17.24	13.19	13.28	20.76	12.36	12.43	34.13	22.60	33.39	23.11
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.41	5.82	5.70	0.89	5.25	5.19	1.42	5.30	1.71	6.12
50th-Percentile Queue Length [ft]	10.25	145.38	142.41	22.17	131.21	129.78	35.43	132.41	42.81	152.93
95th-Percentile Queue Length [veh]	0.74	9.77	9.61	1.60	9.01	8.93	2.55	9.07	3.08	10.17
95th-Percentile Queue Length [ft]	18.46	244.25	240.26	39.91	225.14	223.20	63.78	226.77	77.06	254.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.24	13.23	13.28	20.76	12.39	12.43	34.13	22.60	22.60	33.39	23.11	23.11
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.35			12.86			24.66			25.06		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.70											
Intersection LOS	B											
Intersection V/C	0.507											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.407

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	128	63	23	112	38	47	337	54	15	413	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	128	63	23	112	38	47	337	54	15	413	35
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	44	22	6	29	10	12	88	14	4	107	9
Total Analysis Volume [veh/h]	28	177	87	24	117	40	49	351	56	16	428	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	54	54	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.17	0.08	0.03	0.23	0.04	0.24	0.02
s, saturation flow rate [veh/h]	1713	1668	1527	1733	1560	1878	1548
c, Capacity [veh/h]	410	404	322	1219	1051	1313	1044
d1, Uniform Delay [s]	29.87	26.84	25.52	5.37	4.39	5.53	4.34
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.30	0.52	0.17	0.72	0.10	0.70	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.71	0.35	0.12	0.33	0.05	0.34	0.03
d, Delay for Lane Group [s/veh]	32.17	27.36	25.69	6.09	4.49	6.23	4.40
Lane Group LOS	C	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.32	2.25	0.61	2.34	0.27	2.65	0.17
50th-Percentile Queue Length [ft]	133.00	56.22	15.16	58.47	6.71	66.27	4.26
95th-Percentile Queue Length [veh]	9.10	4.05	1.09	4.21	0.48	4.77	0.31
95th-Percentile Queue Length [ft]	227.57	101.20	27.28	105.25	12.07	119.28	7.66

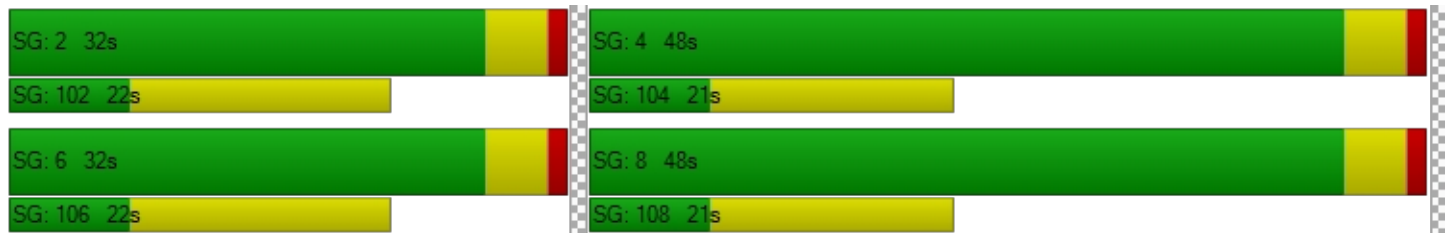


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.17	32.17	32.17	27.36	27.36	25.69	6.09	6.09	4.49	6.23	6.23	4.40
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	32.17			26.99			5.89			6.09		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	14.11											
Intersection LOS	B											
Intersection V/C	0.407											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	47	741	49	24	743	62	94	342	58	84	370	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	741	49	24	743	62	94	342	58	84	370	33
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	203	13	6	193	16	24	88	15	23	103	9
Total Analysis Volume [veh/h]	51	811	54	25	771	64	97	352	60	93	410	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.08	0.23	0.23	0.04	0.22	0.22	0.10	0.22	0.09	0.24
s, saturation flow rate [veh/h]	667	1900	1850	648	1900	1840	951	1845	987	1864
c, Capacity [veh/h]	337	1001	975	327	1001	970	208	660	231	667
d1, Uniform Delay [s]	17.13	11.62	11.63	16.76	11.51	11.52	34.14	21.22	32.46	21.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.95	1.39	1.44	0.46	1.31	1.36	0.60	0.76	0.42	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.44	0.44	0.08	0.42	0.42	0.47	0.62	0.40	0.67
d, Delay for Lane Group [s/veh]	18.08	13.00	13.07	17.21	12.81	12.89	34.74	21.98	32.88	22.99
Lane Group LOS	B	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.70	4.72	4.64	0.33	4.52	4.42	1.80	6.05	1.66	6.80
50th-Percentile Queue Length [ft]	17.55	118.03	115.91	8.33	112.98	110.47	44.97	151.24	41.56	169.88
95th-Percentile Queue Length [veh]	1.26	8.28	8.17	0.60	8.01	7.87	3.24	10.08	2.99	11.07
95th-Percentile Queue Length [ft]	31.58	207.12	204.20	15.00	200.13	196.66	80.95	252.08	74.81	276.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.08	13.03	13.07	17.21	12.85	12.89	34.74	21.98	21.98	32.88	22.99	22.99
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.32			12.98			24.41			24.70		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.39											
Intersection LOS	B											
Intersection V/C	0.471											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	27	484	41	34	350	74	79	394	61	80	319	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	484	41	34	350	74	79	394	61	80	319	48
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	133	11	10	105	22	21	103	16	20	81	12
Total Analysis Volume [veh/h]	30	533	45	41	422	89	82	410	64	81	323	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.28	0.03	0.05	0.22	0.06	0.08	0.26	0.09	0.20
s, saturation flow rate [veh/h]	971	1900	1548	882	1900	1537	999	1833	926	1822
c, Capacity [veh/h]	423	957	780	348	957	774	280	669	213	665
d1, Uniform Delay [s]	16.22	11.98	8.88	19.15	11.08	9.15	25.84	19.04	29.80	17.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	2.34	0.14	0.69	1.47	0.30	0.21	1.10	0.42	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.56	0.06	0.12	0.44	0.11	0.29	0.71	0.38	0.56
d, Delay for Lane Group [s/veh]	16.54	14.32	9.02	19.84	12.56	9.45	26.05	20.14	30.21	18.02
Lane Group LOS	B	B	A	B	B	A	C	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.34	5.46	0.33	0.54	3.94	0.68	1.17	6.12	1.27	4.37
50th-Percentile Queue Length [ft]	8.62	136.52	8.33	13.42	98.40	17.05	29.23	152.89	31.76	109.31
95th-Percentile Queue Length [veh]	0.62	9.29	0.60	0.97	7.08	1.23	2.10	10.17	2.29	7.80
95th-Percentile Queue Length [ft]	15.52	232.33	15.00	24.15	177.12	30.69	52.62	254.29	57.17	195.05

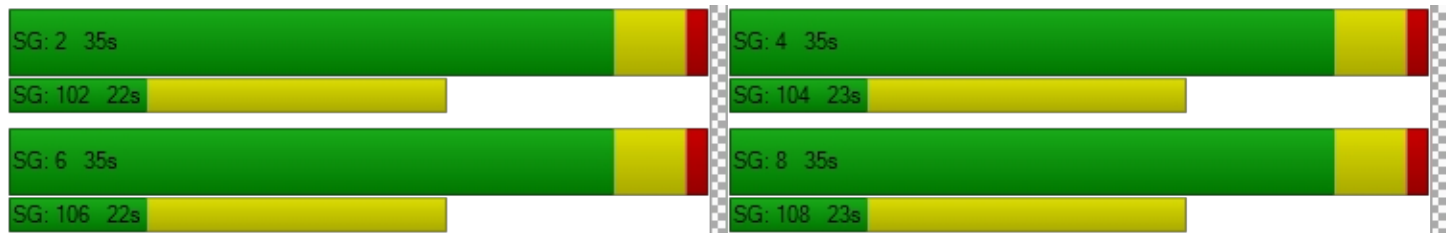


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.54	14.32	9.02	19.84	12.56	9.45	26.05	20.14	20.14	30.21	18.02	18.02
Movement LOS	B	B	A	B	B	A	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	14.04			12.60			21.02			20.20		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.75											
Intersection LOS	B											
Intersection V/C	0.539											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	519	145	87	408	109	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	519	145	87	408	109	75
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	43	24	115	33	23
Total Analysis Volume [veh/h]	616	172	98	458	133	91
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	30	30	30	30	30	30
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	6	6
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.32	0.11	0.12	0.24	0.07	0.06
s, saturation flow rate [veh/h]	1900	1551	810	1900	1810	1512
c, Capacity [veh/h]	952	777	392	952	354	295
d1, Uniform Delay [s]	5.58	4.24	11.29	4.97	10.59	10.44
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.05	0.12	0.14	0.25	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

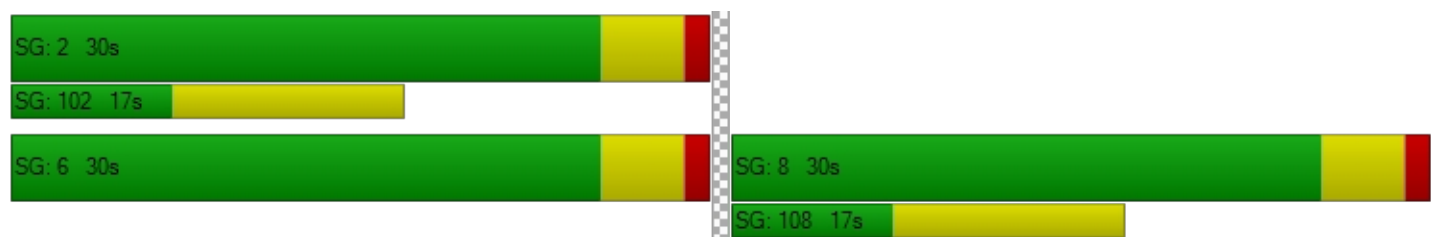
X, volume / capacity	0.65	0.22	0.25	0.48	0.38	0.31
d, Delay for Lane Group [s/veh]	5.86	4.30	11.42	5.11	10.84	10.66
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.28	0.27	0.45	0.83	0.62	0.42
50th-Percentile Queue Length [ft]	31.88	6.66	11.30	20.82	15.44	10.46
95th-Percentile Queue Length [veh]	2.30	0.48	0.81	1.50	1.11	0.75
95th-Percentile Queue Length [ft]	57.39	11.99	20.33	37.48	27.80	18.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.86	4.30	11.42	5.11	10.84	10.66
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.52		6.22		10.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.52					
Intersection LOS	A					
Intersection V/C	0.398					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	38	886	110	124	901	51	74	243	129	69	482	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	886	110	124	901	51	74	243	129	69	482	35
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	263	33	32	235	13	21	69	36	20	137	10
Total Analysis Volume [veh/h]	45	1052	131	130	941	53	84	275	146	78	546	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	37	37	37	37	37	33	33	33	33	33
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.08	0.29	0.08	0.24	0.26	0.27	0.10	0.14	0.09	0.07	0.31
s, saturation flow rate [veh/h]	574	3618	1551	544	1900	1851	840	1900	1563	1111	1872
c, Capacity [veh/h]	236	1695	727	215	890	867	193	791	651	412	780
d1, Uniform Delay [s]	24.15	15.92	12.34	31.22	15.34	15.39	34.24	15.92	15.02	21.70	19.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	1.72	0.54	12.07	2.58	2.69	1.55	0.26	0.17	0.22	3.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.62	0.18	0.61	0.56	0.57	0.44	0.35	0.22	0.19	0.75
d, Delay for Lane Group [s/veh]	25.94	17.64	12.88	43.29	17.92	18.08	35.79	16.18	15.19	21.92	23.35
Lane Group LOS	C	B	B	D	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.80	7.19	1.42	3.11	6.57	6.49	1.63	3.30	1.65	1.13	9.55
50th-Percentile Queue Length [ft]	19.93	179.85	35.49	77.87	164.16	162.15	40.84	82.43	41.35	28.14	238.81
95th-Percentile Queue Length [veh]	1.43	11.59	2.56	5.61	10.77	10.66	2.94	5.94	2.98	2.03	14.62
95th-Percentile Queue Length [ft]	35.87	289.82	63.88	140.17	269.22	266.57	73.51	148.38	74.42	50.65	365.52

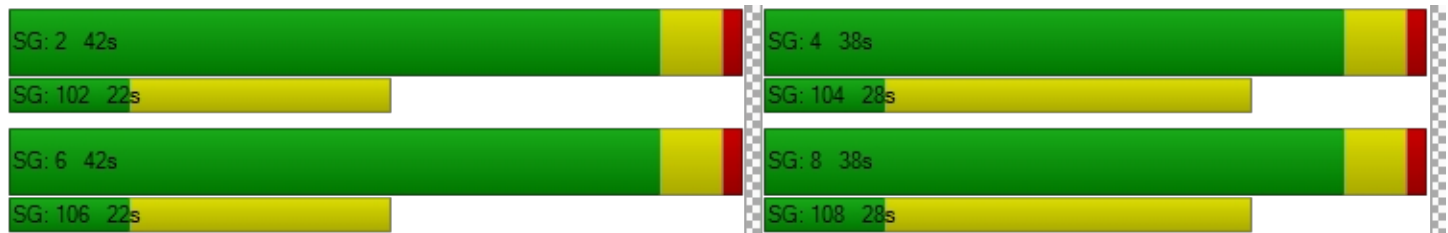


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.94	17.64	12.88	43.29	17.99	18.08	35.79	16.18	15.19	21.92	23.35	23.35
Movement LOS	C	B	B	D	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.44			20.92			19.16			23.18		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	19.88											
Intersection LOS	B											
Intersection V/C	0.604											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↵			↵↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	19	140	111	96	136	41	65	425	75	21	691	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	140	111	96	136	41	65	425	75	21	691	13
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	40	32	30	42	13	17	114	20	6	185	3
Total Analysis Volume [veh/h]	22	162	128	118	167	50	70	457	81	22	740	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	44	44	44	44	44
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.55	0.55	0.55	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.02	0.17	0.20	0.28	0.08	0.10	0.14	0.15	0.03	0.40
s, saturation flow rate [veh/h]	1231	1707	600	600	600	720	1900	1774	876	1891
c, Capacity [veh/h]	142	569	188	200	200	264	1048	979	489	1043
d1, Uniform Delay [s]	37.35	21.41	22.13	24.63	19.39	25.46	9.39	9.43	12.18	13.36
k, delay calibration	0.11	0.11	0.13	0.30	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.71	3.97	21.16	0.65	2.44	0.61	0.67	0.17	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

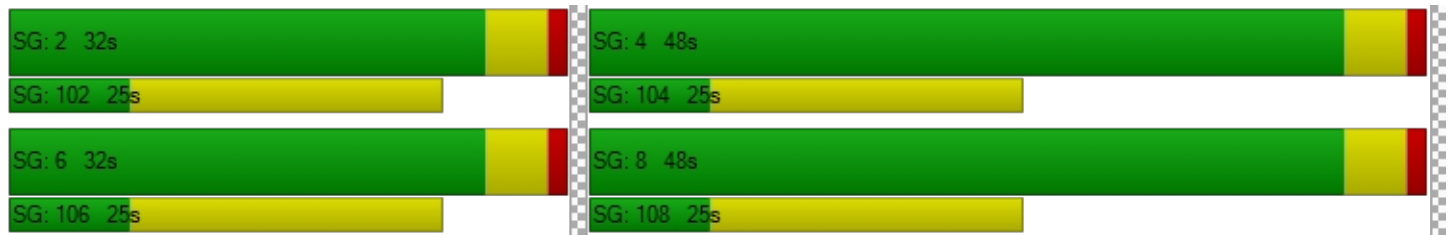
X, volume / capacity	0.16	0.51	0.63	0.84	0.25	0.26	0.26	0.27	0.05	0.72
d, Delay for Lane Group [s/veh]	37.85	22.12	26.10	45.79	20.04	27.89	10.00	10.10	12.35	17.70
Lane Group LOS	D	C	C	D	C	C	A	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.43	4.20	1.93	3.88	0.67	1.26	2.46	2.37	0.23	10.14
50th-Percentile Queue Length [ft]	10.66	104.92	48.14	97.02	16.84	31.54	61.40	59.21	5.80	253.51
95th-Percentile Queue Length [veh]	0.77	7.55	3.47	6.99	1.21	2.27	4.42	4.26	0.42	15.36
95th-Percentile Queue Length [ft]	19.19	188.85	86.64	174.63	30.32	56.78	110.51	106.57	10.43	384.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.85	22.12	22.12	26.10	45.79	20.04	27.89	10.04	10.10	12.35	17.70	17.70
Movement LOS	D	C	C	C	D	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	23.23			35.01			12.10			17.55		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	19.67											
Intersection LOS	B											
Intersection V/C	0.677											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	76	755	96	111	838	275	76	554	122	98	590	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	755	96	111	838	275	76	554	122	98	590	45
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	209	27	29	218	71	20	147	32	27	162	12
Total Analysis Volume [veh/h]	84	834	106	115	871	286	80	586	129	107	647	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	72	62	62	72	61	61	39	27	27	39	28	28
g / C, Green / Cycle	0.60	0.52	0.52	0.60	0.51	0.51	0.32	0.22	0.22	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.13	0.25	0.25	0.16	0.32	0.33	0.08	0.19	0.21	0.11	0.19	0.19
s, saturation flow rate [veh/h]	661	1900	1807	736	1900	1684	979	1900	1682	1011	1900	1828
c, Capacity [veh/h]	365	988	940	429	967	856	271	427	378	266	451	434
d1, Uniform Delay [s]	14.50	18.47	18.54	12.33	21.17	21.60	30.98	44.70	45.38	32.14	42.79	42.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.09	0.14	0.17	0.04	0.09	0.10
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	1.70	1.83	1.53	3.01	3.79	0.51	6.57	13.25	0.36	2.55	3.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.49	0.49	0.27	0.62	0.65	0.30	0.86	0.92	0.40	0.78	0.79
d, Delay for Lane Group [s/veh]	15.97	20.18	20.36	13.85	24.19	25.39	31.49	51.27	58.63	32.51	45.35	45.98
Lane Group LOS	B	C	C	B	C	C	C	D	E	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.06	8.86	8.57	1.46	12.66	12.07	1.69	11.27	11.41	2.27	10.06	9.90
50th-Percentile Queue Length [ft]	26.56	221.48	214.25	36.38	316.50	301.85	42.27	281.76	285.16	56.80	251.42	247.58
95th-Percentile Queue Length [veh]	1.91	13.74	13.37	2.62	18.50	17.77	3.04	16.78	16.95	4.09	15.26	15.06
95th-Percentile Queue Length [ft]	47.80	343.51	334.27	65.48	462.38	444.31	76.09	419.40	423.63	102.24	381.44	376.61

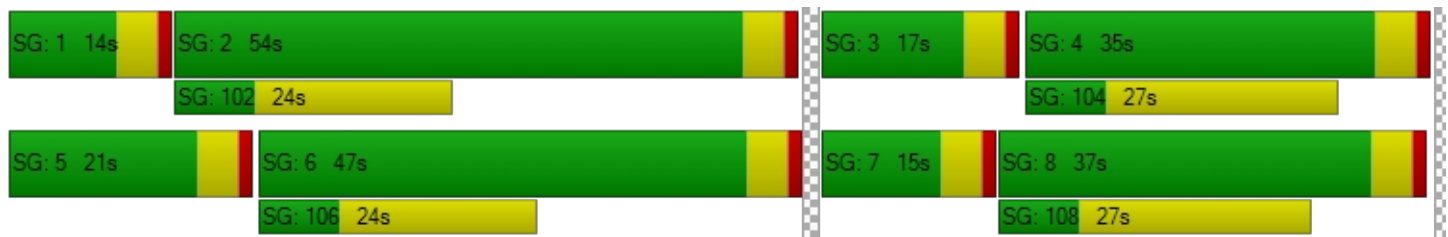


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.97	20.26	20.36	13.85	24.56	25.39	31.49	54.00	58.63	32.51	45.63	45.98
Movement LOS	B	C	C	B	C	C	C	D	E	C	D	D
d_A, Approach Delay [s/veh]	19.92			23.78			52.49			43.91		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	32.78											
Intersection LOS	C											
Intersection V/C	0.603											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	55	441	120	68	394	113	70	642	94	72	620	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	441	120	68	394	113	70	642	94	72	620	49
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	120	33	18	101	29	19	174	26	20	168	13
Total Analysis Volume [veh/h]	60	481	131	70	406	116	76	698	102	78	673	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	36	25	25	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.08	0.08	0.21	0.07	0.10	0.22	0.22	0.11	0.19	0.20
s, saturation flow rate [veh/h]	989	1900	1569	925	1900	1565	732	1900	1785	686	1900	1825
c, Capacity [veh/h]	453	969	801	400	969	798	225	681	640	202	681	654
d1, Uniform Delay [s]	15.54	11.24	9.16	17.42	10.68	9.07	27.07	18.36	18.45	28.93	17.86	17.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	1.81	0.44	0.95	1.33	0.38	0.33	0.32	0.35	0.45	0.25	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.50	0.16	0.17	0.42	0.15	0.34	0.60	0.61	0.39	0.54	0.55
d, Delay for Lane Group [s/veh]	16.15	13.06	9.60	18.37	12.01	9.45	27.39	18.68	18.80	29.38	18.11	18.20
Lane Group LOS	B	B	A	B	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.68	4.62	1.02	0.87	3.67	0.89	1.15	5.05	4.86	1.24	4.41	4.32
50th-Percentile Queue Length [ft]	17.00	115.57	25.38	21.73	91.82	22.23	28.70	126.37	121.58	30.89	110.37	108.12
95th-Percentile Queue Length [veh]	1.22	8.15	1.83	1.56	6.61	1.60	2.07	8.74	8.48	2.22	7.86	7.74
95th-Percentile Queue Length [ft]	30.60	203.72	45.68	39.12	165.28	40.01	51.67	218.55	212.00	55.59	196.52	193.38

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.15	13.06	9.60	18.37	12.01	9.45	27.39	18.73	18.80	29.38	18.15	18.20
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.66			12.26			19.49			19.24		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.41											
Intersection LOS	B											
Intersection V/C	0.472											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	14	266	45	79	275	99	55	659	265	245	578	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	266	45	79	275	99	55	659	265	245	578	45
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	74	12	25	89	32	15	180	73	71	166	13
Total Analysis Volume [veh/h]	16	295	50	102	355	128	60	722	290	282	666	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.02	0.08	0.03	0.09	0.13	0.14	0.08	0.20	0.19	0.38	0.19	0.19
s, saturation flow rate [veh/h]	917	3618	1547	1084	1900	1686	742	3618	1554	738	1900	1841
c, Capacity [veh/h]	396	1570	672	488	825	732	305	1570	675	299	825	799
d1, Uniform Delay [s]	16.47	12.17	11.55	16.00	12.88	12.96	20.10	13.96	13.74	28.47	13.82	13.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.32	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.26	0.22	0.97	0.95	1.14	0.12	0.08	0.16	29.93	0.14	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.04	0.19	0.07	0.21	0.30	0.32	0.20	0.46	0.43	0.94	0.44	0.44
d, Delay for Lane Group [s/veh]	16.66	12.43	11.77	16.97	13.83	14.10	20.22	14.04	13.90	58.40	13.96	13.98
Lane Group LOS	B	B	B	B	B	B	C	B	B	E	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.19	1.40	0.47	1.22	2.56	2.41	0.74	3.67	2.92	7.15	3.67	3.59
50th-Percentile Queue Length [ft]	4.83	34.88	11.76	30.39	64.03	60.27	18.58	91.78	72.97	178.67	91.86	89.70
95th-Percentile Queue Length [veh]	0.35	2.51	0.85	2.19	4.61	4.34	1.34	6.61	5.25	11.53	6.61	6.46
95th-Percentile Queue Length [ft]	8.69	62.78	21.17	54.69	115.25	108.49	33.45	165.20	131.34	288.28	165.35	161.45

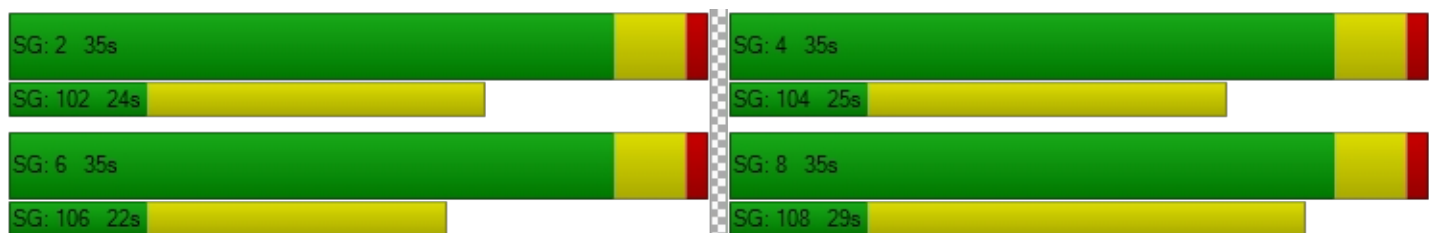


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.66	12.43	11.77	16.97	13.91	14.10	20.22	14.04	13.90	58.40	13.97	13.98
Movement LOS	B	B	B	B	B	B	C	B	B	E	B	B
d_A, Approach Delay [s/veh]	12.53			14.48			14.35			26.50		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.18											
Intersection LOS	B											
Intersection V/C	0.520											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	57	578	51	109	450	108	152	784	288	168	454	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	578	51	109	450	108	152	784	288	168	454	69
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	153	14	29	121	29	44	229	84	47	127	19
Total Analysis Volume [veh/h]	60	613	54	118	486	117	177	915	336	188	507	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	36	24	24	37	26	26	74	62	62	74	62	62
g / C, Green / Cycle	0.30	0.20	0.20	0.31	0.21	0.21	0.62	0.52	0.52	0.62	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.06	0.18	0.18	0.07	0.16	0.17	0.18	0.34	0.35	0.29	0.16	0.16
s, saturation flow rate [veh/h]	1074	1900	1831	1763	1900	1735	971	1900	1697	638	1900	1802
c, Capacity [veh/h]	285	379	365	541	407	372	611	979	874	360	986	935
d1, Uniform Delay [s]	31.73	46.80	46.91	30.92	44.29	44.53	10.43	21.42	21.87	17.54	16.49	16.52
k, delay calibration	0.04	0.04	0.05	0.04	0.04	0.04	0.34	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	3.16	3.94	0.07	1.13	1.39	0.81	3.53	4.42	5.32	0.79	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

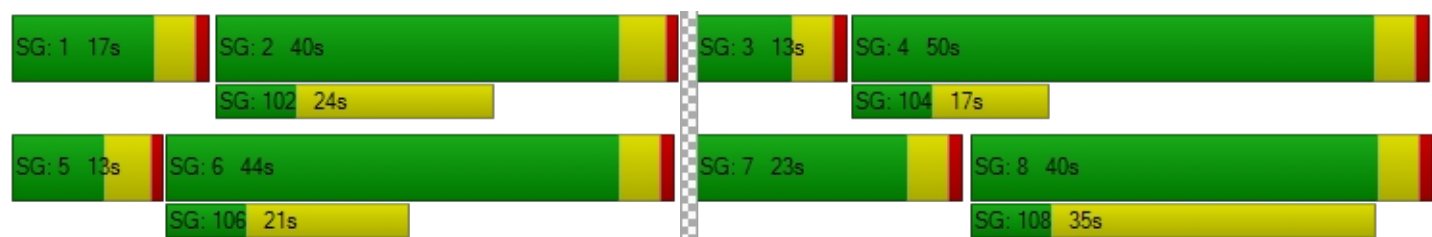
X, volume / capacity	0.21	0.89	0.90	0.22	0.76	0.78	0.29	0.66	0.69	0.52	0.30	0.31
d, Delay for Lane Group [s/veh]	31.87	49.96	50.85	30.99	45.43	45.92	11.24	24.95	26.29	22.86	17.28	17.36
Lane Group LOS	C	D	D	C	D	D	B	C	C	C	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.36	10.67	10.49	2.74	9.30	8.79	2.08	14.02	13.46	2.61	4.87	4.68
50th-Percentile Queue Length [ft]	33.92	266.82	262.24	68.51	232.51	219.85	51.95	350.52	336.42	65.18	121.83	117.00
95th-Percentile Queue Length [veh]	2.44	16.03	15.80	4.93	14.30	13.66	3.74	20.16	19.47	4.69	8.49	8.23
95th-Percentile Queue Length [ft]	61.05	400.77	395.03	123.31	357.55	341.44	93.51	504.04	486.82	117.33	212.34	205.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.87	50.36	50.85	30.99	45.60	45.92	11.24	25.34	26.29	22.86	17.32	17.36
Movement LOS	C	D	D	C	D	D	B	C	C	C	B	B
d_A, Approach Delay [s/veh]	48.87			43.26			23.82			18.67		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	31.57											
Intersection LOS	C											
Intersection V/C	0.635											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	35.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach						
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	746	176	0	613	346	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	746	176	0	613	346	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	201	47	0	173	109	0
Total Analysis Volume [veh/h]	803	189	0	692	436	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.27	0.29	0.19	0.12
s, saturation flow rate [veh/h]	1810	1730	3618	3618
c, Capacity [veh/h]	511	489	2225	2225
d1, Uniform Delay [s]	31.85	32.22	8.23	7.56
k, delay calibration	0.39	0.43	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.56	41.37	0.36	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.97	1.01	0.31	0.20
d, Delay for Lane Group [s/veh]	60.40	73.59	8.59	7.76
Lane Group LOS	E	F	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	13.55	15.08	2.99	1.73
50th-Percentile Queue Length [ft]	338.82	377.07	74.72	43.18
95th-Percentile Queue Length [veh]	19.59	21.65	5.38	3.11
95th-Percentile Queue Length [ft]	489.76	541.25	134.49	77.72

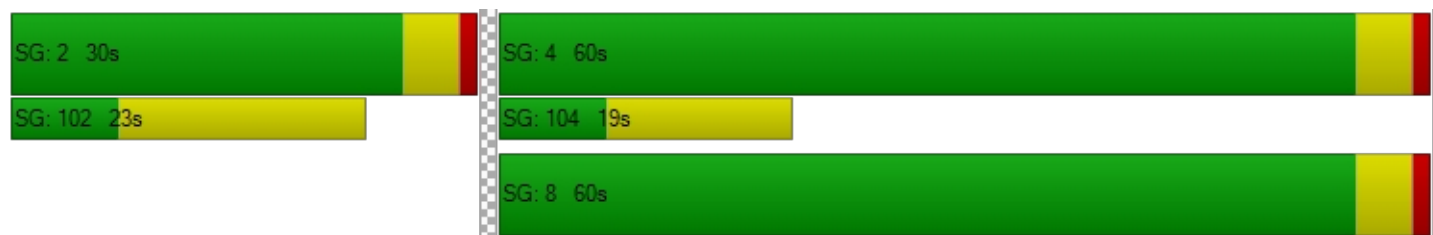


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	65.44	73.59	0.00	8.59	7.76	0.00
Movement LOS	E	E		A	A	
d_A, Approach Delay [s/veh]	67.00		8.59		7.76	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	35.75					
Intersection LOS	D					
Intersection V/C	0.478					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.283

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	27	62	71	10	70	22	95	574	20	7	459	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	62	71	10	70	22	95	574	20	7	459	36
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	16	19	3	21	7	28	167	6	2	138	11
Total Analysis Volume [veh/h]	28	65	75	12	85	27	110	666	23	8	551	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	67	67	67	67	67
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.13	0.18	0.18	0.16	0.16
s, saturation flow rate [veh/h]	1673	1794	836	1900	1873	1900	1845
c, Capacity [veh/h]	308	324	632	1408	1389	1408	1367
d1, Uniform Delay [s]	35.42	34.31	5.96	3.67	3.68	3.56	3.58
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.28	0.60	0.42	0.42	0.34	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

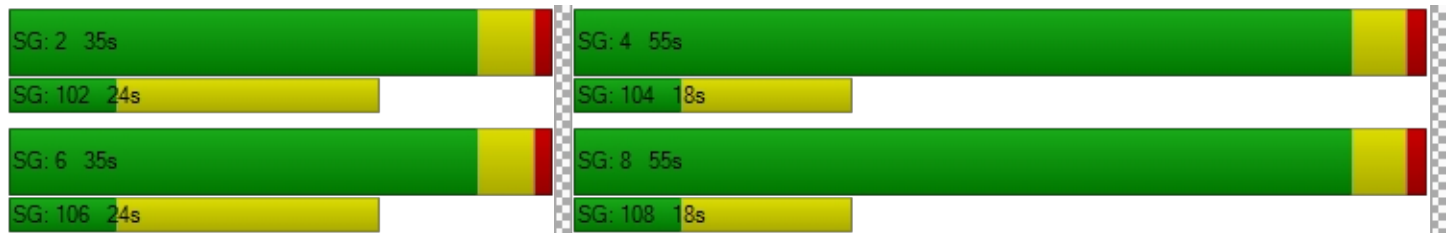
X, volume / capacity	0.55	0.38	0.17	0.25	0.25	0.21	0.22
d, Delay for Lane Group [s/veh]	35.98	34.59	6.56	4.09	4.10	3.90	3.95
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.39	2.42	0.81	1.68	1.66	1.39	1.40
50th-Percentile Queue Length [ft]	84.69	60.40	20.33	41.88	41.49	34.75	35.05
95th-Percentile Queue Length [veh]	6.10	4.35	1.46	3.02	2.99	2.50	2.52
95th-Percentile Queue Length [ft]	152.44	108.72	36.59	75.38	74.68	62.54	63.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.98	35.98	35.98	34.59	34.59	34.59	6.56	4.10	4.10	0.00	3.92	3.95
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.98			34.59			4.44			3.92		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.62											
Intersection LOS	A											
Intersection V/C	0.283											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	86	696	33	77	848	199	85	361	62	263	186	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	696	33	77	848	199	85	361	62	263	186	102
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	211	10	21	227	53	24	104	18	74	53	29
Total Analysis Volume [veh/h]	104	844	40	82	908	213	98	415	71	298	211	116
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	43	34	34	43	33	33	21	21	21	38	38	48
g / C, Green / Cycle	0.47	0.38	0.38	0.47	0.37	0.37	0.24	0.24	0.24	0.42	0.42	0.53
(v / s)_j Volume / Saturation Flow Rate	0.14	0.23	0.24	0.10	0.30	0.33	0.09	0.13	0.14	0.23	0.11	0.08
s, saturation flow rate [veh/h]	746	1900	1843	813	1900	1670	1142	1900	1756	1269	1900	1523
c, Capacity [veh/h]	315	722	700	379	693	609	244	451	417	549	808	812
d1, Uniform Delay [s]	18.71	22.63	22.73	15.11	26.13	26.93	36.12	30.11	30.28	18.77	16.74	10.62
k, delay calibration	0.50	0.50	0.50	0.05	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	3.93	4.21	0.14	11.37	17.79	0.40	0.39	0.46	0.31	0.06	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.62	0.63	0.22	0.83	0.89	0.40	0.55	0.57	0.54	0.26	0.14
d, Delay for Lane Group [s/veh]	21.50	26.56	26.94	15.26	37.50	44.72	36.52	30.50	30.73	19.08	16.80	10.65
Lane Group LOS	C	C	C	B	D	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.35	7.99	7.94	0.88	12.79	13.27	1.99	4.61	4.44	4.15	2.75	1.11
50th-Percentile Queue Length [ft]	33.85	199.77	198.47	21.97	319.81	331.71	49.77	115.26	111.12	103.86	68.67	27.83
95th-Percentile Queue Length [veh]	2.44	12.63	12.56	1.58	18.66	19.24	3.58	8.13	7.90	7.48	4.94	2.00
95th-Percentile Queue Length [ft]	60.94	315.67	313.99	39.55	466.45	481.06	89.59	203.29	197.56	186.96	123.60	50.09

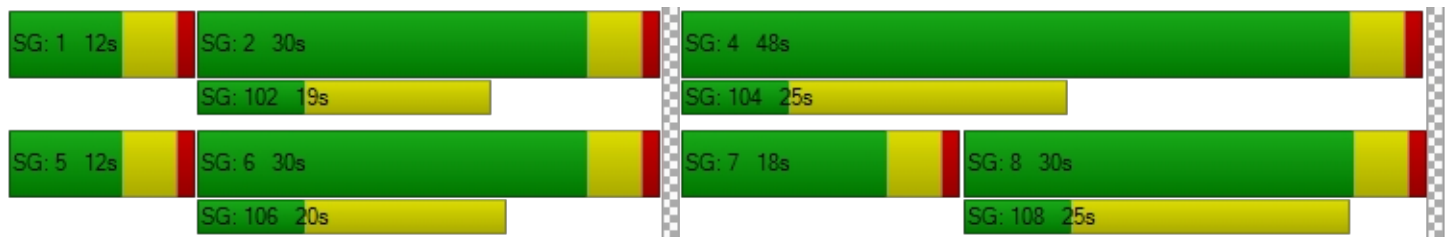


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.50	26.74	26.94	15.26	40.12	44.72	36.52	30.60	30.73	19.08	16.80	10.65
Movement LOS	C	C	C	B	D	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	26.20			39.24			31.61			16.75		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	30.00											
Intersection LOS	C											
Intersection V/C	0.618											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	42	907	56	32	1068	35	56	81	23	52	142	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	907	56	32	1068	35	56	81	23	52	142	41
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	241	15	9	295	10	18	25	7	17	45	13
Total Analysis Volume [veh/h]	45	964	60	35	1178	39	70	101	29	66	181	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	18	18
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.10	0.27	0.27	0.06	0.32	0.32	0.17	0.19
s, saturation flow rate [veh/h]	466	1900	1851	559	1900	1875	1207	1579
c, Capacity [veh/h]	308	1246	1213	371	1246	1229	338	417
d1, Uniform Delay [s]	12.48	6.52	6.53	10.54	7.00	7.01	27.47	29.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.02	1.06	0.50	1.39	1.41	0.62	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

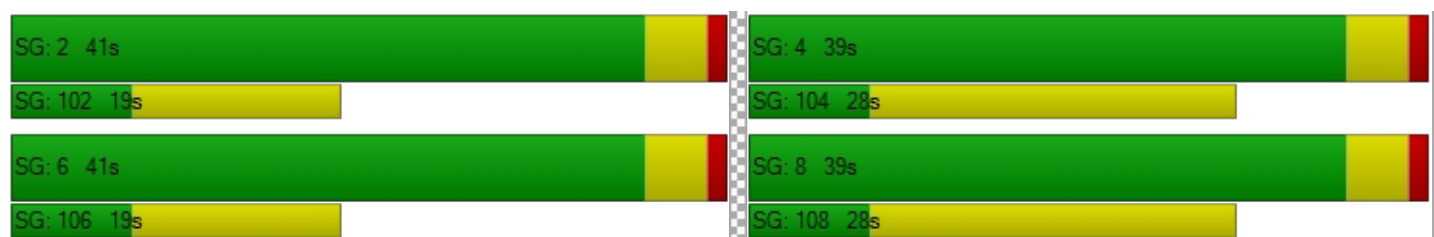
X, volume / capacity	0.15	0.42	0.42	0.09	0.49	0.49	0.59	0.72
d, Delay for Lane Group [s/veh]	13.48	7.54	7.59	11.05	8.38	8.42	28.09	29.95
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.52	3.60	3.54	0.35	4.59	4.56	3.35	5.27
50th-Percentile Queue Length [ft]	12.97	89.90	88.52	8.72	114.87	114.00	83.69	131.71
95th-Percentile Queue Length [veh]	0.93	6.47	6.37	0.63	8.11	8.06	6.03	9.03
95th-Percentile Queue Length [ft]	23.35	161.82	159.34	15.70	202.75	201.55	150.64	225.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.48	7.57	7.59	11.05	8.40	8.42	28.09	28.09	28.09	29.95	29.95	29.95
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.82			8.47			28.09			29.95		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.89											
Intersection LOS	B											
Intersection V/C	0.512											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	16	798	25	34	1206	167	176	61	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	16	798	25	34	1206	167	176	61	47
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	4	206	6	9	327	45	54	19	14
Total Analysis Volume [veh/h]	0	0	0	17	826	26	37	1310	181	216	75	58
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		89	89	89	89	89	89	22	22
g / C, Green / Cycle		0.74	0.74	0.74	0.74	0.74	0.74	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate		0.05	0.23	0.23	0.06	0.40	0.41	0.16	0.04
s, saturation flow rate [veh/h]		359	1900	1872	656	1900	1810	1771	1558
c, Capacity [veh/h]		258	1414	1394	487	1414	1347	317	279
d1, Uniform Delay [s]		12.65	5.06	5.06	7.77	6.51	6.59	48.32	41.94
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.16	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.49	0.55	0.56	0.30	1.45	1.59	14.92	0.14
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.07	0.30	0.30	0.08	0.53	0.55	0.92	0.21
d, Delay for Lane Group [s/veh]		13.14	5.61	5.62	8.08	7.96	8.18	63.23	42.08
Lane Group LOS		B	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.25	3.34	3.31	0.39	7.95	7.86	9.75	1.47
50th-Percentile Queue Length [ft]		6.26	83.45	82.74	9.86	198.68	196.43	243.65	36.74
95th-Percentile Queue Length [veh]		0.45	6.01	5.96	0.71	12.57	12.45	14.87	2.65
95th-Percentile Queue Length [ft]		11.27	150.21	148.94	17.74	314.26	311.36	371.64	66.13



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	13.14	5.62	5.62	8.08	8.05	8.18	63.23	63.23	42.08
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			5.76			8.07			59.72		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	13.90											
Intersection LOS	B											
Intersection V/C	0.570											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	946	73	96	925	25	220	7	201	9	7	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	946	73	96	925	25	220	7	201	9	7	7
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	254	20	25	238	6	62	2	56	4	3	3
Total Analysis Volume [veh/h]	11	1015	78	99	952	26	247	8	225	14	11	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	71	71	82	82	82	19	19	5
g / C, Green / Cycle	0.59	0.59	0.68	0.68	0.68	0.16	0.16	0.04
(v / s)_j Volume / Saturation Flow Rate	0.31	0.31	0.15	0.26	0.26	0.14	0.14	0.02
s, saturation flow rate [veh/h]	1869	1664	671	1900	1879	1812	1576	1770
c, Capacity [veh/h]	1131	979	447	1298	1284	291	253	73
d1, Uniform Delay [s]	14.62	14.81	9.17	8.11	8.12	49.18	49.30	56.29
k, delay calibration	0.50	0.50	0.29	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	2.09	0.66	0.84	0.85	3.32	4.23	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

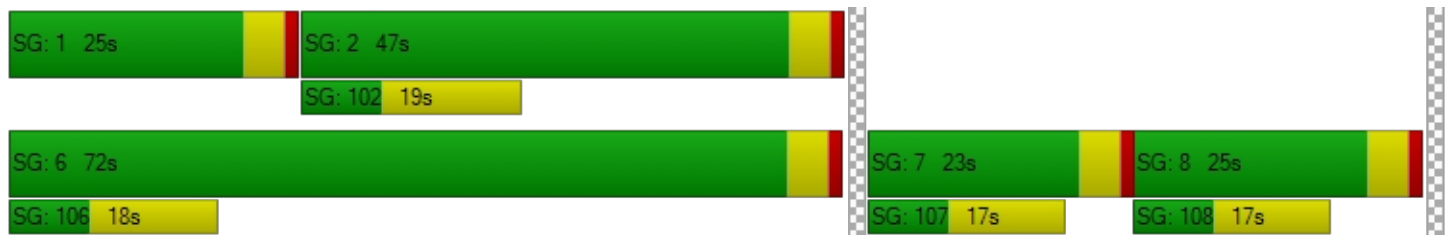
X, volume / capacity	0.51	0.53	0.22	0.38	0.38	0.88	0.89	0.50
d, Delay for Lane Group [s/veh]	16.29	16.90	9.83	8.95	8.97	52.49	53.53	58.23
Lane Group LOS	B	B	A	A	A	D	D	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.38	8.66	0.86	5.23	5.19	7.78	6.94	1.10
50th-Percentile Queue Length [ft]	234.55	216.46	21.52	130.83	129.80	194.49	173.53	27.48
95th-Percentile Queue Length [veh]	14.41	13.48	1.55	8.98	8.93	12.35	11.26	1.98
95th-Percentile Queue Length [ft]	360.13	337.10	38.74	224.62	223.22	308.85	281.55	49.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.29	16.56	16.90	9.83	8.96	8.97	52.49	52.49	53.53	58.23	58.23	58.23
Movement LOS	B	B	B	A	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	16.58			9.04			52.98			58.23		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	20.60											
Intersection LOS	C											
Intersection V/C	0.499											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.809

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	666	36	144	716	16	148	325	296	13	191	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	666	36	144	716	16	148	325	296	13	191	13
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	172	9	39	195	4	39	85	78	3	51	3
Total Analysis Volume [veh/h]	0	690	37	157	781	17	156	341	311	14	204	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.39	0.17	0.42	0.13	0.38	0.02	0.11	0.01
s, saturation flow rate [veh/h]	1877	917	1891	1195	1735	793	1900	1560
c, Capacity [veh/h]	835	372	1060	360	586	81	641	526
d1, Uniform Delay [s]	22.60	16.68	15.04	30.35	29.80	44.97	22.12	19.93
k, delay calibration	0.50	0.39	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.98	2.69	4.96	0.31	72.36	0.38	0.11	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.87	0.42	0.75	0.43	1.11	0.17	0.32	0.03
d, Delay for Lane Group [s/veh]	34.59	19.37	20.00	30.65	102.16	45.35	22.23	19.93
Lane Group LOS	C	B	C	C	F	D	C	B
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	15.54	1.59	12.03	2.95	23.85	0.32	3.19	0.20
50th-Percentile Queue Length [ft]	388.57	39.85	300.70	73.67	596.29	8.03	79.87	4.94
95th-Percentile Queue Length [veh]	22.01	2.87	17.72	5.30	34.15	0.58	5.75	0.36
95th-Percentile Queue Length [ft]	550.21	71.73	442.90	132.61	853.70	14.45	143.77	8.88

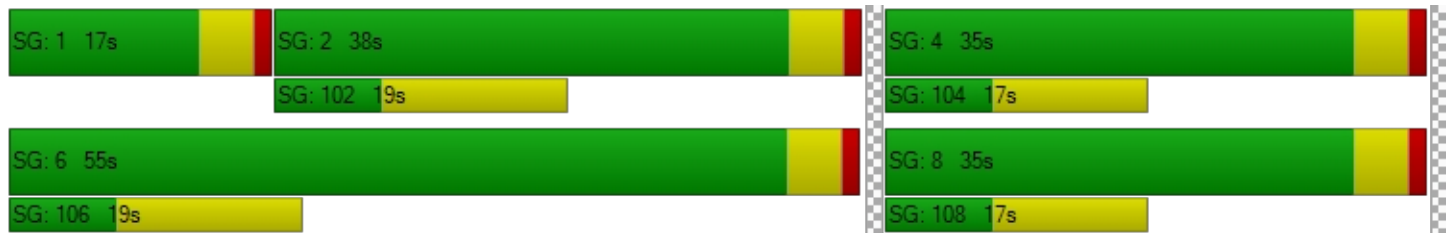


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	34.59	34.59	19.37	20.00	20.00	30.65	102.16	102.16	45.35	22.23	19.93
Movement LOS		C	C	B	C	C	C	F	F	D	C	B
d_A, Approach Delay [s/veh]		34.59		19.90			88.36			23.48		
Approach LOS		C		B			F			C		
d_I, Intersection Delay [s/veh]		44.45										
Intersection LOS		D										
Intersection V/C		0.809										

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.344

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	23	523	469	18	26	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	523	469	18	26	16
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	143	123	5	12	7
Total Analysis Volume [veh/h]	25	571	493	19	47	29
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	3
g / C, Green / Cycle	0.43	0.43	0.43	0.12
(v / s)_j Volume / Saturation Flow Rate	0.03	0.30	0.27	0.04
s, saturation flow rate [veh/h]	881	1900	1879	1730
c, Capacity [veh/h]	463	821	812	219
d1, Uniform Delay [s]	8.06	4.80	4.62	8.32
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.40	0.30	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

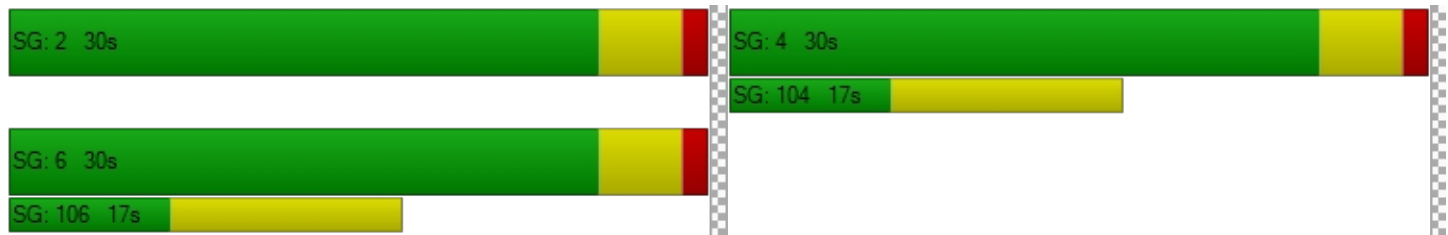
X, volume / capacity	0.05	0.70	0.63	0.35
d, Delay for Lane Group [s/veh]	8.08	5.20	4.92	8.67
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.59	0.50	0.18
50th-Percentile Queue Length [ft]	1.56	14.71	12.42	4.42
95th-Percentile Queue Length [veh]	0.11	1.06	0.89	0.32
95th-Percentile Queue Length [ft]	2.81	26.48	22.36	7.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.08	5.20	4.92	4.92	8.67	8.67
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.32		4.92		8.67	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.36					
Intersection LOS	A					
Intersection V/C	0.344					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	662	340	204	947	475	199
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	662	340	204	947	475	199
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	174	90	55	257	127	53
Total Analysis Volume [veh/h]	698	358	221	1027	507	213
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	70	70	16	91	20	20
g / C, Green / Cycle	0.58	0.58	0.14	0.76	0.17	0.17
(v / s)_j Volume / Saturation Flow Rate	0.28	0.32	0.12	0.28	0.14	0.15
s, saturation flow rate [veh/h]	1900	1662	1810	3618	3514	1461
c, Capacity [veh/h]	1104	965	248	2737	586	244
d1, Uniform Delay [s]	14.58	15.44	50.82	4.96	48.63	48.71
k, delay calibration	0.50	0.50	0.06	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.49	2.23	6.35	0.39	1.54	3.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.48	0.55	0.89	0.38	0.87	0.87
d, Delay for Lane Group [s/veh]	16.07	17.66	57.18	5.36	50.17	52.57
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	8.73	9.36	6.95	3.90	7.49	6.46
50th-Percentile Queue Length [ft]	218.31	233.95	173.66	97.59	187.31	161.55
95th-Percentile Queue Length [veh]	13.58	14.37	11.27	7.03	11.98	10.63
95th-Percentile Queue Length [ft]	339.46	359.37	281.72	175.66	299.54	265.77



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.46	17.66	57.18	5.36	50.17	52.57
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	16.87		14.53		50.88	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	24.00					
Intersection LOS	C					
Intersection V/C	0.586					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	23	344	264	63	271	28	244	625	66	28	535	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	344	264	63	271	28	244	625	66	28	535	12
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	93	71	18	77	8	63	161	17	7	143	3
Total Analysis Volume [veh/h]	25	371	285	72	308	32	252	644	68	30	573	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	5	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	10	41	0	0	31	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	20	20	20
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.42	0.42	0.42	0.28	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.19	0.07	0.16	0.02	0.23	0.19	0.20	0.04	0.15	0.16
s, saturation flow rate [veh/h]	1076	1900	1524	1010	1900	1556	1106	1900	1794	735	1900	1869
c, Capacity [veh/h]	442	850	682	393	850	696	505	800	756	181	528	520
d1, Uniform Delay [s]	16.84	13.29	13.16	19.14	12.77	10.92	14.57	14.50	14.58	29.17	21.61	21.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.41	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.63	1.88	1.02	1.20	0.12	2.91	0.15	0.16	0.16	0.34	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

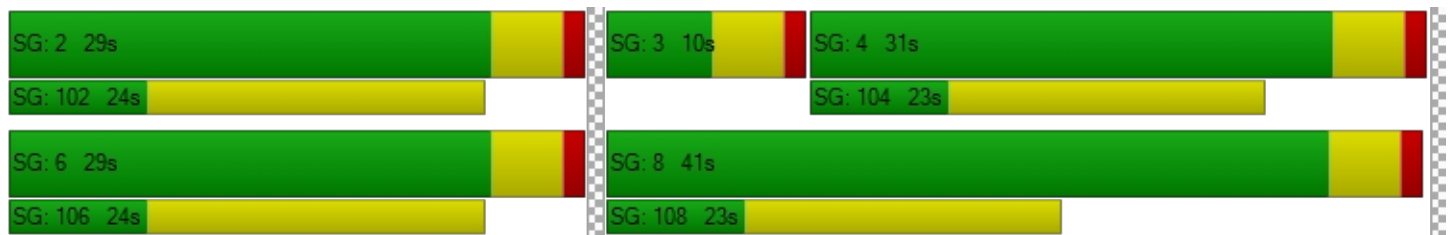
X, volume / capacity	0.06	0.44	0.42	0.18	0.36	0.05	0.50	0.45	0.46	0.17	0.56	0.56
d, Delay for Lane Group [s/veh]	17.08	14.92	15.04	20.16	13.96	11.05	17.48	14.65	14.75	29.33	21.95	22.00
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.29	3.92	3.04	0.95	3.10	0.27	2.85	3.77	3.67	0.46	3.92	3.91
50th-Percentile Queue Length [ft]	7.30	97.90	76.05	23.67	77.46	6.86	71.35	94.24	91.69	11.52	98.11	97.65
95th-Percentile Queue Length [veh]	0.53	7.05	5.48	1.70	5.58	0.49	5.14	6.79	6.60	0.83	7.06	7.03
95th-Percentile Queue Length [ft]	13.14	176.22	136.88	42.60	139.44	12.35	128.43	169.63	165.04	20.74	176.59	175.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.08	14.92	15.04	20.16	13.96	11.05	17.48	14.69	14.75	29.33	21.98	22.00
Movement LOS	B	B	B	C	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.05			14.82			15.42			22.33		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.83											
Intersection LOS	B											
Intersection V/C	0.448											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	44	320	314	99	393	50	292	952	220	34	757	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	320	314	99	393	50	292	952	220	34	757	40
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	86	84	29	117	15	74	243	56	9	199	11
Total Analysis Volume [veh/h]	47	344	337	118	467	59	298	970	224	36	798	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	55	9	28	28	13	63	77	5	56	56
g / C, Green / Cycle	0.05	0.20	0.46	0.08	0.23	0.23	0.11	0.53	0.64	0.04	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10	0.22	0.04	0.14	0.14	0.08	0.27	0.14	0.02	0.22	0.22
s, saturation flow rate [veh/h]	1810	3618	1498	2796	1900	1798	3514	3618	1557	1810	1900	1857
c, Capacity [veh/h]	84	728	689	233	440	417	371	1908	1001	74	880	860
d1, Uniform Delay [s]	55.99	42.29	22.54	55.13	41.21	41.35	52.44	18.30	8.94	56.27	22.25	22.29
k, delay calibration	0.04	0.04	0.18	0.04	0.04	0.04	0.04	0.50	0.48	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	0.18	0.92	0.64	0.51	0.56	1.57	0.97	0.50	1.81	1.89	1.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.56	0.47	0.49	0.51	0.61	0.62	0.80	0.51	0.22	0.48	0.48	0.48
d, Delay for Lane Group [s/veh]	58.15	42.47	23.46	55.77	41.72	41.91	54.02	19.27	9.44	58.09	24.14	24.24
Lane Group LOS	E	D	C	E	D	D	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.44	4.53	6.75	1.77	7.14	6.92	4.47	8.77	2.50	1.11	8.63	8.51
50th-Percentile Queue Length [ft]	36.12	113.25	168.81	44.25	178.56	173.11	111.66	219.24	62.44	27.64	215.84	212.72
95th-Percentile Queue Length [veh]	2.60	8.02	11.01	3.19	11.53	11.24	7.93	13.63	4.50	1.99	13.45	13.29
95th-Percentile Queue Length [ft]	65.02	200.52	275.34	79.65	288.13	281.00	198.30	340.66	112.39	49.75	336.31	332.32

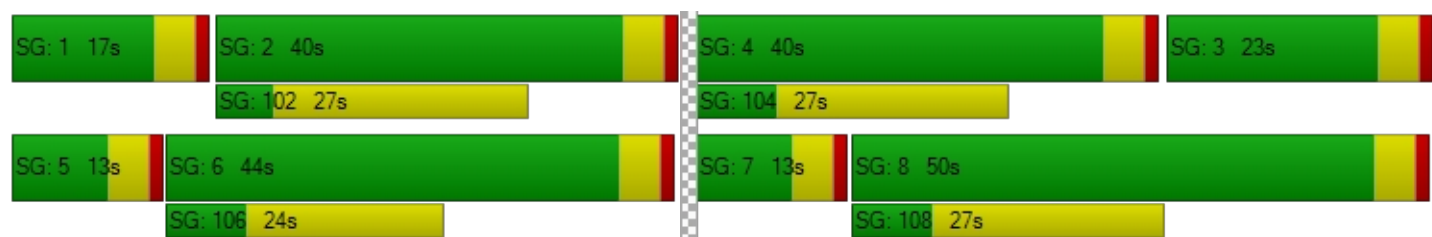


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.15	42.47	23.46	55.77	41.80	41.91	54.02	19.27	9.44	58.09	24.19	24.24
Movement LOS	E	D	C	E	D	D	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	34.68			44.37			24.74			25.58		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.25											
Intersection LOS	C											
Intersection V/C	0.570											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	41.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	TTL			TTL			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	166	556	346	227	469	146	229	1163	30	117	869	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	166	556	346	227	469	146	229	1163	30	117	869	24
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	146	91	67	138	43	62	315	8	32	238	7
Total Analysis Volume [veh/h]	174	583	363	266	550	171	248	1260	32	128	953	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	30	30	11	31	31	10	54	54	6	50	50
g / C, Green / Cycle	0.09	0.25	0.25	0.09	0.26	0.26	0.09	0.45	0.45	0.05	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.10	0.16	0.24	0.08	0.15	0.11	0.07	0.24	0.24	0.04	0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	1497	3514	3618	1512	3514	3618	1868	3514	3618	1867
c, Capacity [veh/h]	157	905	374	324	923	386	307	1633	843	186	1509	779
d1, Uniform Delay [s]	54.74	40.20	44.51	53.45	39.22	37.50	53.74	23.60	23.63	55.80	24.79	24.82
k, delay calibration	0.18	0.15	0.43	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	74.92	1.10	36.01	1.99	0.88	1.14	1.95	1.19	2.32	1.69	0.07	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

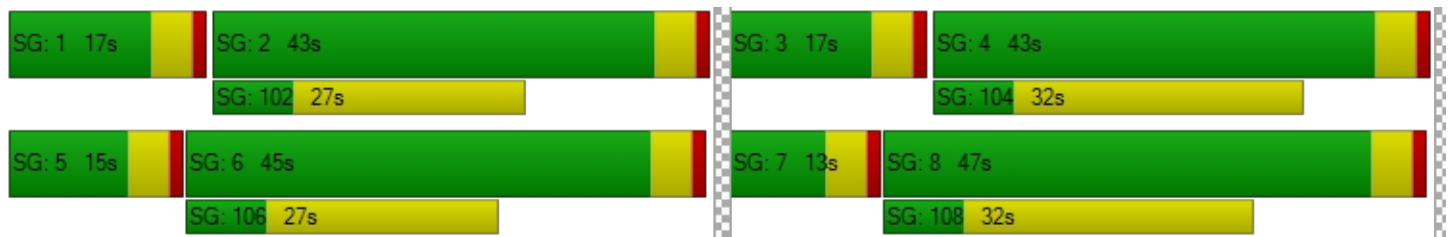
X, volume / capacity	1.10	0.64	0.97	0.82	0.60	0.44	0.81	0.52	0.52	0.69	0.43	0.43
d, Delay for Lane Group [s/veh]	129.65	41.30	80.52	55.45	40.10	38.64	55.70	24.79	25.95	57.49	24.86	25.46
Lane Group LOS	F	D	F	E	D	D	E	C	C	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	8.26	8.29	14.98	3.93	7.00	4.22	3.76	8.83	9.43	1.95	6.50	6.87
50th-Percentile Queue Length [ft]	206.50	207.17	374.51	98.23	175.08	105.46	93.90	220.76	235.83	48.71	162.54	171.82
95th-Percentile Queue Length [veh]	13.44	13.01	21.33	7.07	11.34	7.59	6.76	13.70	14.47	3.51	10.68	11.17
95th-Percentile Queue Length [ft]	336.12	325.20	533.20	176.82	283.58	189.67	169.03	342.60	361.75	87.67	267.08	279.31

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	129.65	41.30	80.52	55.45	40.10	38.64	55.70	25.17	25.95	57.49	25.06	25.46
Movement LOS	F	D	F	E	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	67.74			43.98			30.10			28.82		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	41.55											
Intersection LOS	D											
Intersection V/C	0.591											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	138	17	122	27	12	59	136	1564	72	70	1311	136
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	138	17	122	27	12	59	136	1564	72	70	1311	136
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	6	46	8	3	17	34	395	18	20	384	40
Total Analysis Volume [veh/h]	209	26	185	31	14	67	137	1578	73	82	1535	159
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	11	71	71	7	67	67
g / C, Green / Cycle	0.24	0.24	0.24	0.24	0.24	0.09	0.59	0.59	0.06	0.56	0.56
(v / s)_j Volume / Saturation Flow Rate	0.16	0.01	0.11	0.02	0.05	0.08	0.30	0.30	0.05	0.31	0.31
s, saturation flow rate [veh/h]	1324	1900	1609	1402	1601	1810	3618	1852	1810	3618	1807
c, Capacity [veh/h]	292	452	383	348	381	164	2132	1092	104	2012	1005
d1, Uniform Delay [s]	48.48	35.30	39.34	38.74	36.67	53.64	14.47	14.50	55.80	17.17	17.21
k, delay calibration	0.04	0.04	0.04	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	0.02	0.35	0.11	0.28	4.19	0.88	1.73	4.92	1.14	2.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.72	0.06	0.48	0.09	0.21	0.83	0.51	0.51	0.79	0.56	0.56
d, Delay for Lane Group [s/veh]	49.73	35.32	39.69	38.85	36.94	57.83	15.35	16.22	60.73	18.31	19.49
Lane Group LOS	D	D	D	D	D	E	B	B	E	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.16	0.59	4.70	0.75	1.93	4.25	8.68	9.19	2.59	10.07	10.44
50th-Percentile Queue Length [ft]	153.90	14.75	117.43	18.80	48.28	106.36	217.01	229.83	64.81	251.77	260.97
95th-Percentile Queue Length [veh]	10.22	1.06	8.25	1.35	3.48	7.64	13.51	14.17	4.67	15.28	15.74
95th-Percentile Queue Length [ft]	255.62	26.55	206.29	33.84	86.90	190.93	337.80	354.14	116.65	381.88	393.44

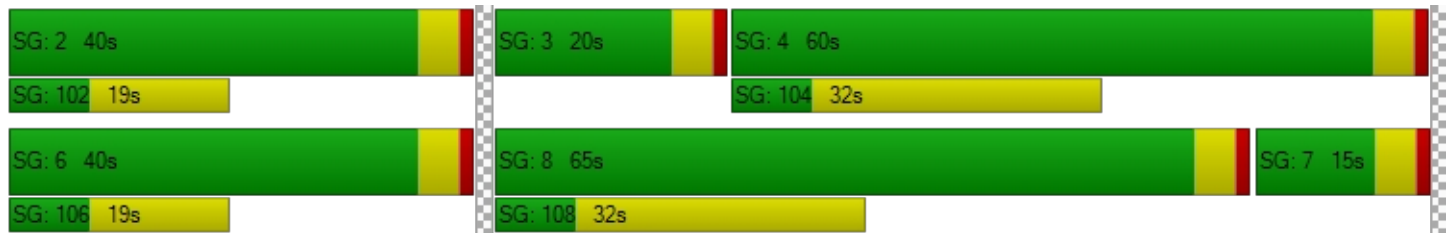


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.73	35.32	39.69	38.85	36.94	36.94	57.83	15.62	16.22	60.73	18.62	19.49
Movement LOS	D	D	D	D	D	D	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	44.41			37.47			18.88			20.64		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]	22.77											
Intersection LOS	C											
Intersection V/C	0.547											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	261	1383	559	0	0	1397
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	261	1383	559	0	0	1397
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	362	151	0	0	386
Total Analysis Volume [veh/h]	273	1447	604	0	0	1544
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	89	22	75
g / C, Green / Cycle	0.29	0.74	0.19	0.63
(v / s)_i Volume / Saturation Flow Rate	0.08	0.80	0.17	0.22
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1328	671	4336
d1, Uniform Delay [s]	32.32	15.72	47.77	10.67
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	52.82	1.87	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

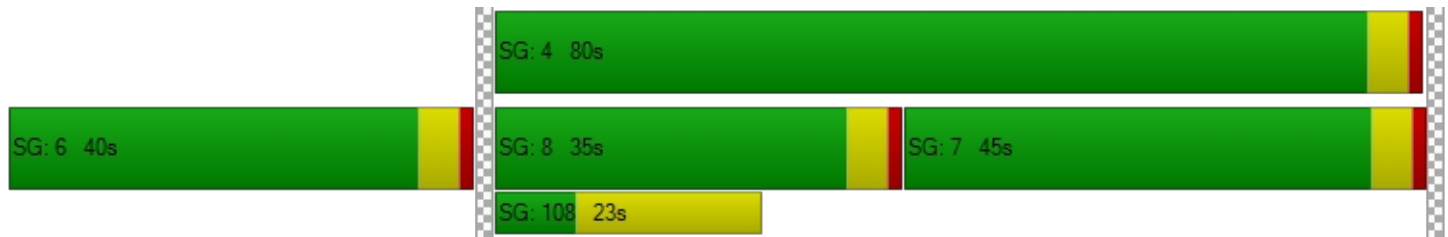
X, volume / capacity	0.26	1.09	0.90	0.36
d, Delay for Lane Group [s/veh]	32.37	68.53	49.64	10.90
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	2.89	21.69	8.97	4.79
50th-Percentile Queue Length [ft]	72.23	542.28	224.24	119.85
95th-Percentile Queue Length [veh]	5.20	31.50	13.88	8.38
95th-Percentile Queue Length [ft]	130.01	787.50	347.03	209.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.37	68.53	49.64	0.00	0.00	10.90
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	62.79		49.64		10.90	
Approach LOS	E		D		B	
d_I, Intersection Delay [s/veh]	40.03					
Intersection LOS	D					
Intersection V/C	0.528					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.621

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	48	0	0	0	0	471	406	1114	646	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	48	0	0	0	0	471	406	1114	646	0
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	20	0	0	0	0	131	112	296	171	0
Total Analysis Volume [veh/h]	0	0	80	0	0	0	0	522	450	1182	686	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		35	35	75	115	115
g / C, Green / Cycle		0.29	0.29	0.63	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.14	0.28	0.34	0.18	0.18
s, saturation flow rate [veh/h]		3618	1582	3514	1900	1900
c, Capacity [veh/h]		1065	466	2210	1827	1827
d1, Uniform Delay [s]		34.89	41.72	12.44	0.11	0.11
k, delay calibration		0.04	0.41	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.13	30.13	0.93	0.23	0.23
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.49	0.97	0.53	0.19	0.19
d, Delay for Lane Group [s/veh]		35.02	71.85	13.37	0.34	0.34
Lane Group LOS		D	E	B	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		6.31	16.86	8.74	0.12	0.12
50th-Percentile Queue Length [ft]		157.69	421.59	218.42	2.89	2.89
95th-Percentile Queue Length [veh]		10.43	23.60	13.58	0.21	0.21
95th-Percentile Queue Length [ft]		260.67	589.95	339.61	5.20	5.20



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.02	71.85	13.37	0.34	0.34
Movement LOS								D	E	B	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			52.07			8.58		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	23.47											
Intersection LOS	C											
Intersection V/C	0.621											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	55	49	60	72	80	38	802	28	47	539	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	55	49	60	72	80	38	802	28	47	539	16
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	17	15	19	23	25	10	220	8	15	170	5
Total Analysis Volume [veh/h]	16	69	62	76	91	101	42	879	30	59	680	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	83	83	83	83
g / C, Green / Cycle	0.24	0.24	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.27	0.27	0.25	0.25
s, saturation flow rate [veh/h]	1620	1231	1721	1729	1360	1712
c, Capacity [veh/h]	381	328	1217	1190	971	1178
d1, Uniform Delay [s]	38.18	46.45	7.70	7.96	7.32	7.74
k, delay calibration	0.04	0.31	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	13.03	0.89	0.96	0.98	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

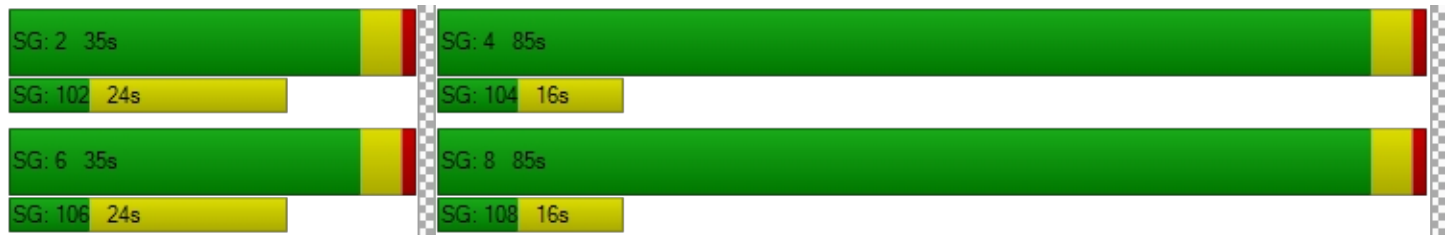
X, volume / capacity	0.34	0.82	0.38	0.39	0.35	0.36
d, Delay for Lane Group [s/veh]	38.38	59.47	8.59	8.92	8.31	8.59
Lane Group LOS	D	E	A	A	A	A
Critical Lane Group	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	3.21	8.95	4.86	5.04	3.35	4.48
50th-Percentile Queue Length [ft]	80.27	223.80	121.39	126.11	83.75	111.91
95th-Percentile Queue Length [veh]	5.78	13.86	8.47	8.73	6.03	7.95
95th-Percentile Queue Length [ft]	144.49	346.47	211.73	218.19	150.75	198.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	38.38	38.38	59.47	59.47	59.47	8.59	8.76	0.00	8.31	8.47	8.59
Movement LOS		D	D	E	E	E	A	A		A	A	A
d_A, Approach Delay [s/veh]		38.38		59.47			8.75			8.46		
Approach LOS		D		E			A			A		
d_I, Intersection Delay [s/veh]		17.05										
Intersection LOS		B										
Intersection V/C		0.485										

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	401	727	22	41	674	132	25	298	33	121	136	347
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	401	727	22	41	674	132	25	298	33	121	136	347
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	104	188	6	12	190	37	7	80	9	35	39	100
Total Analysis Volume [veh/h]	414	751	23	46	761	149	27	321	36	139	157	400
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	38	64	64	4	30	30	24	24	24	38	38	80
g / C, Green / Cycle	0.32	0.54	0.54	0.03	0.25	0.25	0.20	0.20	0.20	0.32	0.32	0.67
(v / s)_j Volume / Saturation Flow Rate	0.12	0.20	0.21	0.03	0.25	0.25	0.02	0.17	0.02	0.11	0.08	0.25
s, saturation flow rate [veh/h]	3514	1900	1869	1810	1900	1751	1230	1900	1483	1296	1900	1573
c, Capacity [veh/h]	1111	1019	1002	61	482	444	216	387	302	326	599	1054
d1, Uniform Delay [s]	31.79	16.22	16.25	57.47	44.34	44.69	46.78	45.74	38.96	32.22	30.64	8.77
k, delay calibration	0.50	0.50	0.50	0.04	0.40	0.42	0.04	0.13	0.04	0.04	0.04	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.96	1.09	1.12	7.05	30.57	38.29	0.10	5.65	0.06	0.33	0.09	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.37	0.38	0.38	0.76	0.97	1.00	0.13	0.83	0.12	0.43	0.26	0.38
d, Delay for Lane Group [s/veh]	32.74	17.31	17.37	64.52	74.90	82.98	46.87	51.39	39.02	32.54	30.72	9.14
Lane Group LOS	C	B	B	E	E	F	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.76	6.34	6.29	1.49	17.61	17.58	0.72	9.65	0.87	3.03	3.43	4.46
50th-Percentile Queue Length [ft]	119.10	158.48	157.32	37.31	440.27	439.60	18.08	241.35	21.74	75.76	85.63	111.53
95th-Percentile Queue Length [veh]	8.34	10.47	10.41	2.69	24.49	24.46	1.30	14.75	1.57	5.45	6.17	7.93
95th-Percentile Queue Length [ft]	208.59	261.71	260.17	67.16	612.33	611.53	32.55	368.74	39.13	136.37	154.13	198.13

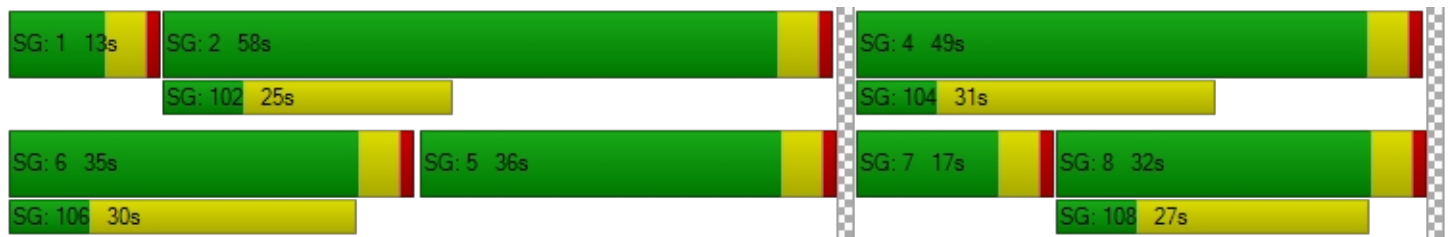


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.74	17.34	17.37	64.52	78.01	82.98	46.87	51.39	39.02	32.54	30.72	9.14
Movement LOS	C	B	B	E	E	F	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	22.71			78.14			49.91			18.68		
Approach LOS	C			E			D			B		
d_I, Intersection Delay [s/veh]	41.51											
Intersection LOS	D											
Intersection V/C	0.651											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	206	777	791	45	59	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	206	777	791	45	59	86
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	203	205	12	17	24
Total Analysis Volume [veh/h]	215	813	821	47	66	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	73	73	63	63	8	8
g / C, Green / Cycle	0.81	0.81	0.70	0.70	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.27	0.43	0.43	0.03	0.04	0.07
s, saturation flow rate [veh/h]	796	1900	1900	1587	1810	1441
c, Capacity [veh/h]	603	1537	1334	1114	161	128
d1, Uniform Delay [s]	5.60	2.87	7.03	4.12	38.77	40.06
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.65	1.31	2.13	0.07	0.63	3.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

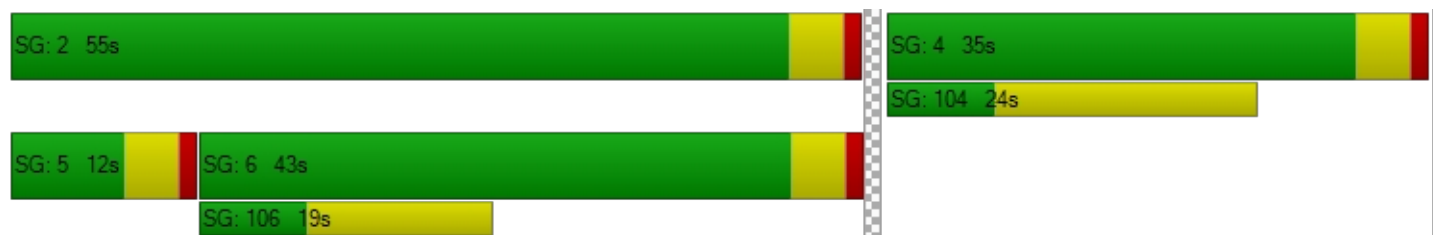
X, volume / capacity	0.36	0.53	0.62	0.04	0.41	0.76
d, Delay for Lane Group [s/veh]	7.25	4.17	9.17	4.19	39.40	43.50
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.63	2.59	6.72	0.22	1.38	2.17
50th-Percentile Queue Length [ft]	15.63	64.85	167.96	5.52	34.38	54.20
95th-Percentile Queue Length [veh]	1.13	4.67	10.97	0.40	2.48	3.90
95th-Percentile Queue Length [ft]	28.14	116.74	274.24	9.93	61.89	97.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.25	4.17	9.17	4.19	39.40	43.50
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.82		8.90		41.84	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	9.47					
Intersection LOS	A					
Intersection V/C	0.532					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	65	734	71	144	765	146	78	181	108	219	282	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	734	71	144	765	146	78	181	108	219	282	153
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	192	19	37	198	38	21	48	29	72	93	50
Total Analysis Volume [veh/h]	68	766	74	149	792	151	83	193	115	288	371	201
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	50	50	12	29	29	14	14	14	25	25	25
g / C, Green / Cycle	0.28	0.42	0.42	0.10	0.24	0.24	0.12	0.12	0.12	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.04	0.21	0.05	0.08	0.22	0.10	0.05	0.10	0.08	0.16	0.20	0.13
s, saturation flow rate [veh/h]	1810	3618	1546	1810	3618	1541	1810	1900	1455	1810	1900	1543
c, Capacity [veh/h]	505	1518	649	177	863	368	217	227	174	379	398	323
d1, Uniform Delay [s]	32.43	25.66	21.24	53.23	44.56	38.59	48.76	51.79	50.52	44.61	46.62	43.13
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.12	0.24	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	1.20	0.36	4.06	1.78	0.27	0.41	3.40	1.60	3.47	18.62	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.50	0.11	0.84	0.92	0.41	0.38	0.85	0.66	0.76	0.93	0.62
d, Delay for Lane Group [s/veh]	32.98	26.86	21.60	57.29	46.34	38.86	49.18	55.18	52.12	48.09	65.23	43.86
Lane Group LOS	C	C	C	E	D	D	D	E	D	D	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.56	8.14	1.33	4.83	12.31	4.02	2.31	5.85	3.36	8.33	12.78	5.44
50th-Percentile Queue Length [ft]	38.88	203.38	33.13	120.86	307.66	100.52	57.71	146.34	83.88	208.24	319.45	135.97
95th-Percentile Queue Length [veh]	2.80	12.81	2.39	8.44	18.06	7.24	4.16	9.82	6.04	13.06	18.64	9.26
95th-Percentile Queue Length [ft]	69.99	320.32	59.63	211.01	451.49	180.94	103.88	245.54	150.98	326.57	466.01	231.59

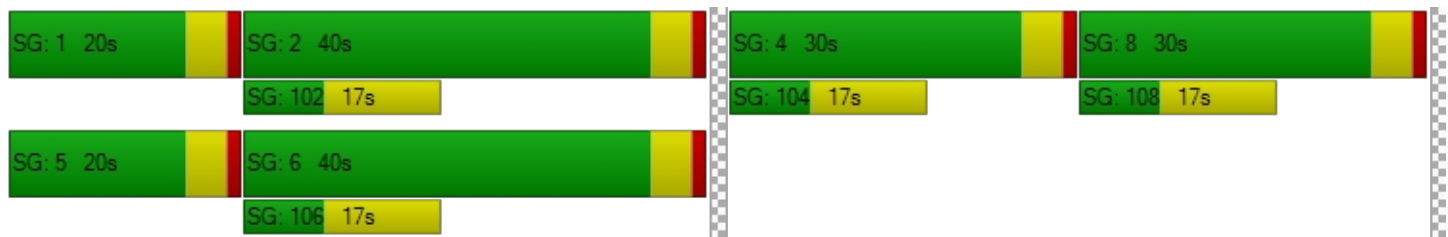


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.98	26.86	21.60	57.29	46.34	38.86	49.18	55.18	52.12	48.09	65.23	43.86
Movement LOS	C	C	C	E	D	D	D	E	D	D	E	D
d_A, Approach Delay [s/veh]	26.89			46.80			53.01			54.49		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	44.02											
Intersection LOS	D											
Intersection V/C	0.591											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	63	408	102	58	408	69	69	318	43	90	437	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	408	102	58	408	69	69	318	43	90	437	64
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	107	27	16	112	19	20	93	13	25	119	17
Total Analysis Volume [veh/h]	66	427	107	64	448	76	81	373	50	98	476	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	22	22	22	22	22	22
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.07	0.28	0.09	0.20	0.03	0.10	0.25	0.04
s, saturation flow rate [veh/h]	892	1803	881	1850	932	1900	1559	1022	1900	1562
c, Capacity [veh/h]	337	860	323	883	232	703	576	302	703	578
d1, Uniform Delay [s]	18.56	11.67	19.19	11.45	25.43	14.84	12.32	22.43	15.91	12.48
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	3.36	1.38	2.93	0.33	0.23	0.02	0.23	0.43	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

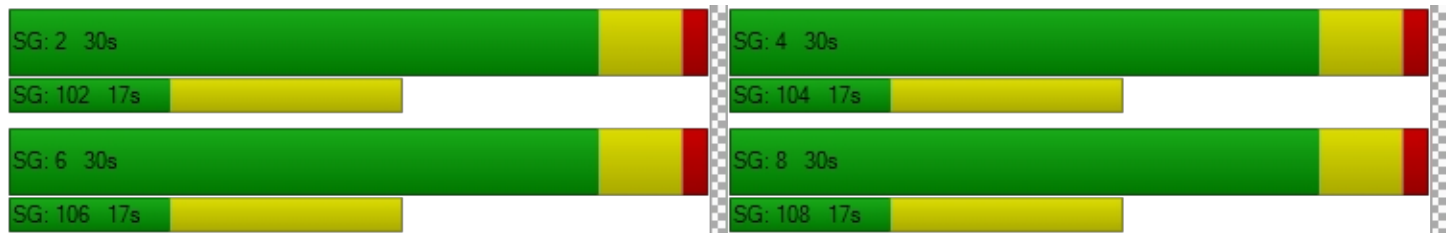
X, volume / capacity	0.20	0.62	0.20	0.59	0.35	0.53	0.09	0.32	0.68	0.12
d, Delay for Lane Group [s/veh]	19.86	15.03	20.57	14.39	25.76	15.07	12.34	22.66	16.34	12.52
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.83	5.41	0.81	4.99	1.05	3.47	0.39	1.17	4.77	0.55
50th-Percentile Queue Length [ft]	20.80	135.28	20.28	124.83	26.13	86.83	9.63	29.16	119.37	13.67
95th-Percentile Queue Length [veh]	1.50	9.23	1.46	8.66	1.88	6.25	0.69	2.10	8.36	0.98
95th-Percentile Queue Length [ft]	37.44	230.65	36.50	216.45	47.04	156.29	17.34	52.49	208.96	24.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.86	15.03	15.03	20.57	14.39	14.39	25.76	15.07	12.34	22.66	16.34	12.52
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.56			15.06			16.52			16.89		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.01											
Intersection LOS	B											
Intersection V/C	0.547											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	42	798	54	76	955	91	94	355	54	140	463	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	798	54	76	955	91	94	355	54	140	463	66
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	222	15	20	251	24	26	100	15	40	134	19
Total Analysis Volume [veh/h]	47	889	60	80	1004	96	105	398	61	162	534	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	64	53	53	64	54	54	47	33	33	47	36	36
g / C, Green / Cycle	0.53	0.44	0.44	0.53	0.45	0.45	0.39	0.28	0.28	0.39	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.07	0.25	0.25	0.10	0.29	0.30	0.10	0.21	0.04	0.13	0.28	0.05
s, saturation flow rate [veh/h]	687	1900	1846	774	1900	1814	1070	1900	1535	1204	1900	1561
c, Capacity [veh/h]	330	833	809	384	848	810	265	527	425	370	563	462
d1, Uniform Delay [s]	17.33	25.30	25.36	16.42	26.01	26.20	28.73	39.63	32.62	26.98	41.30	31.21
k, delay calibration	0.50	0.50	0.50	0.23	0.50	0.50	0.19	0.11	0.04	0.04	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	2.89	3.02	0.56	3.98	4.36	1.72	2.37	0.06	0.30	17.57	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.58	0.58	0.21	0.66	0.67	0.40	0.76	0.14	0.44	0.95	0.16
d, Delay for Lane Group [s/veh]	18.24	28.20	28.38	16.98	29.99	30.56	30.45	42.00	32.68	27.28	58.87	31.27
Lane Group LOS	B	C	C	B	C	C	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.69	10.68	10.49	1.11	13.04	12.82	2.04	10.91	1.34	3.08	17.85	1.63
50th-Percentile Queue Length [ft]	17.15	266.95	262.25	27.64	326.12	320.55	50.98	272.65	33.48	77.10	446.17	40.80
95th-Percentile Queue Length [veh]	1.23	16.04	15.80	1.99	18.97	18.69	3.67	16.32	2.41	5.55	24.77	2.94
95th-Percentile Queue Length [ft]	30.87	400.93	395.04	49.76	474.21	467.36	91.77	408.04	60.26	138.78	619.37	73.44



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.24	28.28	28.38	16.98	30.24	30.56	30.45	42.00	32.68	27.28	58.87	31.27
Movement LOS	B	C	C	B	C	C	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	27.81			29.37			38.84			49.53		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.88											
Intersection LOS	C											
Intersection V/C	0.634											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	10	108	92	13	108	39	55	450	25	23	534	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	108	92	13	108	39	55	450	25	23	534	34
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	39	33	5	38	14	14	117	7	6	151	10
Total Analysis Volume [veh/h]	14	154	131	18	151	55	57	469	26	26	604	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	88	88	88	88
g / C, Green / Cycle	0.19	0.19	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.18	0.14	0.07	0.26	0.03	0.34
s, saturation flow rate [veh/h]	1697	1588	800	1878	914	1875
c, Capacity [veh/h]	358	338	516	1372	621	1370
d1, Uniform Delay [s]	47.37	44.71	11.89	5.90	9.18	6.61
k, delay calibration	0.15	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.02	2.22	0.43	0.74	0.13	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

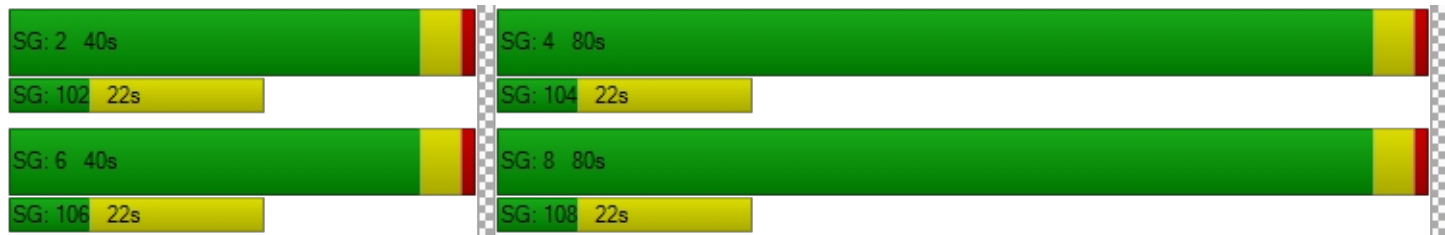
X, volume / capacity	0.83	0.66	0.11	0.36	0.04	0.47
d, Delay for Lane Group [s/veh]	54.39	46.93	12.32	6.64	9.31	7.76
Lane Group LOS	D	D	B	A	A	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	9.31	6.33	0.75	4.23	0.28	6.17
50th-Percentile Queue Length [ft]	232.73	158.15	18.73	105.76	7.07	154.33
95th-Percentile Queue Length [veh]	14.31	10.45	1.35	7.60	0.51	10.25
95th-Percentile Queue Length [ft]	357.83	261.27	33.71	190.08	12.72	256.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	54.39	54.39	54.39	46.93	46.93	46.93	12.32	6.64	6.64	9.31	7.76	7.76
Movement LOS	D	D	D	D	D	D	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	54.39			46.93			7.23			7.82		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	20.65											
Intersection LOS	C											
Intersection V/C	0.519											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	65	594	34	137	937	84	63	378	48	142	435	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	594	34	137	937	84	63	378	48	142	435	83
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	165	9	35	243	22	18	107	14	36	111	21
Total Analysis Volume [veh/h]	72	658	38	142	971	87	72	430	55	145	443	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	57	57	68	59	59	42	29	29	42	33	33
g / C, Green / Cycle	0.57	0.48	0.48	0.57	0.49	0.49	0.35	0.24	0.24	0.35	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.11	0.18	0.19	0.16	0.28	0.29	0.06	0.23	0.04	0.12	0.23	0.06
s, saturation flow rate [veh/h]	676	1900	1853	899	1900	1814	1110	1900	1510	1197	1900	1439
c, Capacity [veh/h]	361	908	886	508	937	894	269	460	365	298	522	395
d1, Uniform Delay [s]	14.61	20.03	20.06	13.17	21.47	21.63	29.29	44.54	35.76	30.71	41.12	33.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.14	0.04	0.04	0.11	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	1.24	1.29	1.37	2.54	2.78	0.20	11.39	0.07	0.46	4.02	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.20	0.39	0.39	0.28	0.57	0.58	0.27	0.94	0.15	0.49	0.85	0.21
d, Delay for Lane Group [s/veh]	15.85	21.28	21.35	14.54	24.01	24.40	29.49	55.93	35.83	31.17	45.14	33.61
Lane Group LOS	B	C	C	B	C	C	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.98	6.56	6.46	1.96	11.12	10.94	1.40	13.76	1.27	2.94	12.74	1.91
50th-Percentile Queue Length [ft]	24.56	164.02	161.48	48.93	278.03	273.58	34.92	344.02	31.77	73.59	318.42	47.79
95th-Percentile Queue Length [veh]	1.77	10.76	10.63	3.52	16.59	16.37	2.51	19.84	2.29	5.30	18.59	3.44
95th-Percentile Queue Length [ft]	44.21	269.04	265.68	88.08	414.75	409.20	62.85	496.11	57.19	132.45	464.75	86.02

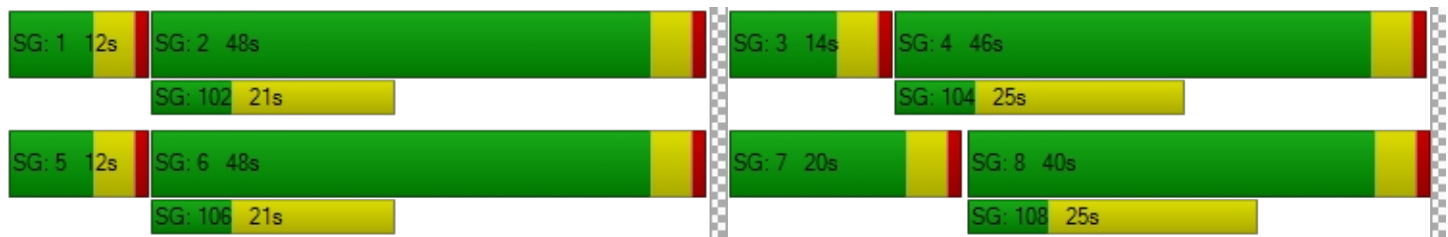


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.85	21.31	21.35	14.54	24.19	24.40	29.49	55.93	35.83	31.17	45.14	33.61
Movement LOS	B	C	C	B	C	C	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	20.80			23.06			50.53			40.67		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.01											
Intersection LOS	C											
Intersection V/C	0.593											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	55	219	90	66	310	31	38	386	28	16	519	84
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	219	90	66	310	31	38	386	28	16	519	84
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	61	25	20	95	10	11	110	8	5	153	25
Total Analysis Volume [veh/h]	62	245	101	81	381	38	43	441	32	19	610	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	29	31	31	31	31	31	31
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.45	0.45	0.45	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.07	0.08	0.22	0.03	0.06	0.26	0.02	0.02	0.36	0.08
s, saturation flow rate [veh/h]	915	1710	1379	1017	1710	1427	742	1710	1358	861	1710	1246
c, Capacity [veh/h]	327	721	582	420	721	602	168	764	607	281	764	557
d1, Uniform Delay [s]	21.38	13.65	12.62	18.01	15.05	12.02	30.95	14.44	10.97	22.53	16.66	11.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	1.28	0.65	1.02	2.76	0.20	0.30	0.26	0.01	0.04	3.33	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.34	0.17	0.19	0.53	0.06	0.26	0.58	0.05	0.07	0.80	0.18
d, Delay for Lane Group [s/veh]	22.66	14.93	13.27	19.03	17.81	12.22	31.25	14.70	10.99	22.57	19.99	11.70
Lane Group LOS	C	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.89	2.59	0.99	1.02	4.55	0.35	0.68	4.59	0.25	0.24	7.94	0.83
50th-Percentile Queue Length [ft]	22.17	64.67	24.83	25.62	113.70	8.80	17.02	114.68	6.30	6.05	198.47	20.72
95th-Percentile Queue Length [veh]	1.60	4.66	1.79	1.84	8.05	0.63	1.23	8.10	0.45	0.44	12.56	1.49
95th-Percentile Queue Length [ft]	39.90	116.41	44.69	46.12	201.14	15.83	30.64	202.49	11.35	10.88	313.99	37.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.66	14.93	13.27	19.03	17.81	12.22	31.25	14.70	10.99	22.57	19.99	11.70
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.69			17.58			15.85			18.93		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.26											
Intersection LOS	B											
Intersection V/C	0.580											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	72	324	83	172	540	111	40	252	57	123	420	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	324	83	172	540	111	40	252	57	123	420	91
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	88	23	47	149	31	11	69	16	34	117	25
Total Analysis Volume [veh/h]	78	352	90	190	596	122	44	274	62	137	469	102
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	41	41	41	29	18	18	29	20	20
g / C, Green / Cycle	0.57	0.57	0.57	0.45	0.45	0.45	0.33	0.20	0.20	0.33	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.08	0.19	0.06	0.18	0.19	0.20	0.04	0.14	0.04	0.10	0.15	0.16
s, saturation flow rate [veh/h]	924	1900	1547	1032	1900	1757	1093	1900	1485	1343	1900	1728
c, Capacity [veh/h]	545	1087	886	421	863	798	350	378	295	408	422	384
d1, Uniform Delay [s]	9.60	10.11	8.75	24.75	16.67	16.74	22.02	33.78	30.17	23.07	32.24	32.47
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.79	0.23	3.47	1.56	1.74	0.06	1.00	0.13	0.18	0.78	0.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.32	0.10	0.45	0.43	0.44	0.13	0.73	0.21	0.34	0.70	0.72
d, Delay for Lane Group [s/veh]	10.15	10.90	8.98	28.22	18.22	18.48	22.08	34.78	30.30	23.24	33.02	33.44
Lane Group LOS	B	B	A	C	B	B	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.72	3.61	0.80	3.63	5.31	5.06	0.64	5.60	1.12	2.06	5.77	5.50
50th-Percentile Queue Length [ft]	17.99	90.25	20.05	90.77	132.75	126.43	15.92	139.99	28.03	51.52	144.37	137.53
95th-Percentile Queue Length [veh]	1.30	6.50	1.44	6.54	9.09	8.75	1.15	9.48	2.02	3.71	9.72	9.35
95th-Percentile Queue Length [ft]	32.38	162.45	36.10	163.38	227.22	218.63	28.66	237.01	50.45	92.74	242.89	233.70

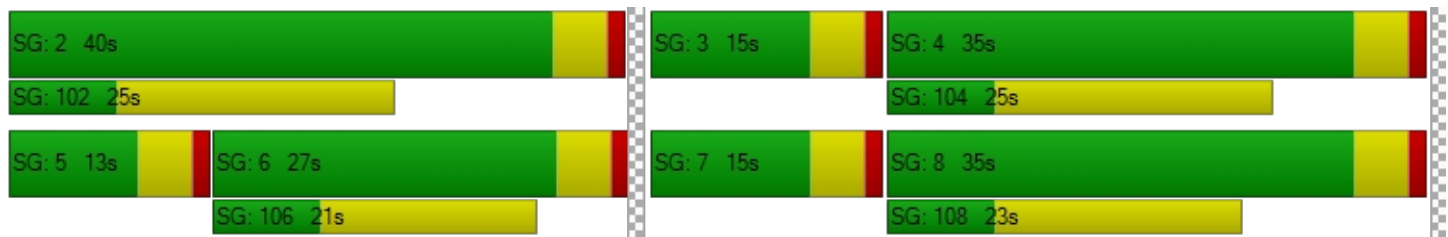


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.15	10.90	8.98	28.22	18.32	18.48	22.08	34.78	30.30	23.24	33.18	33.44
Movement LOS	B	B	A	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.46			20.41			32.58			31.29		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.25											
Intersection LOS	C											
Intersection V/C	0.424											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	17	313	56	108	0	173	0	621	250	104	678	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	313	56	108	0	173	0	621	250	104	678	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	88	16	32	0	52	0	170	69	27	174	0
Total Analysis Volume [veh/h]	19	350	63	129	0	207	0	682	274	107	697	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	3	31	31	7	48	55	55	9	69
g / C, Green / Cycle	0.03	0.26	0.26	0.06	0.40	0.46	0.46	0.07	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.11	0.12	0.04	0.07	0.25	0.29	0.06	0.19
s, saturation flow rate [veh/h]	1810	1900	1656	3514	2818	1900	1675	1810	3618
c, Capacity [veh/h]	50	486	423	205	1125	870	767	135	2066
d1, Uniform Delay [s]	57.32	37.38	37.88	55.24	23.37	23.56	24.67	54.59	13.68
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.15	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.74	0.23	0.31	1.19	0.03	2.49	3.79	13.51	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

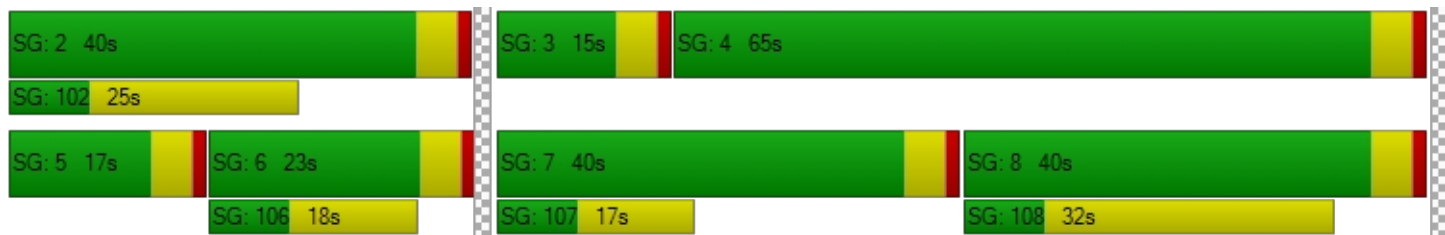
X, volume / capacity	0.38	0.43	0.48	0.63	0.18	0.55	0.62	0.79	0.34
d, Delay for Lane Group [s/veh]	59.06	37.61	38.19	56.43	23.39	26.05	28.47	68.10	14.12
Lane Group LOS	E	D	D	E	C	C	C	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.59	5.22	5.10	1.94	1.92	9.86	10.50	3.84	5.63
50th-Percentile Queue Length [ft]	14.78	130.42	127.50	48.59	48.00	246.44	262.52	96.01	140.73
95th-Percentile Queue Length [veh]	1.06	8.96	8.80	3.50	3.46	15.01	15.82	6.91	9.52
95th-Percentile Queue Length [ft]	26.61	224.07	220.09	87.46	86.40	375.17	395.38	172.82	238.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.06	37.84	38.19	56.43	0.00	23.39	0.00	26.78	28.47	68.10	14.12	0.00
Movement LOS	E	D	D	E		C		C	C	E	B	
d_A, Approach Delay [s/veh]	38.83			36.08			27.26			21.30		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	28.51											
Intersection LOS	C											
Intersection V/C	0.504											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	22	1025	34	48	1305	39	49	50	32	50	73	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	1025	34	48	1305	39	49	50	32	50	73	20
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	284	9	13	347	10	16	17	11	15	21	6
Total Analysis Volume [veh/h]	24	1134	38	51	1387	41	66	67	43	59	86	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	56	56	56	56	56	56	15	15
g / C, Green / Cycle	0.70	0.70	0.70	0.70	0.70	0.70	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.06	0.31	0.31	0.10	0.38	0.38	0.12	0.11
s, saturation flow rate [veh/h]	381	1900	1873	486	1900	1878	1489	1523
c, Capacity [veh/h]	275	1322	1303	349	1322	1306	344	349
d1, Uniform Delay [s]	11.29	5.37	5.38	9.72	5.95	5.96	29.53	29.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.63	1.09	1.11	0.88	1.60	1.63	0.44	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.45	0.45	0.15	0.54	0.54	0.51	0.48
d, Delay for Lane Group [s/veh]	11.92	6.46	6.49	10.60	7.55	7.60	29.97	29.55
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.26	3.53	3.50	0.50	4.81	4.79	3.00	2.83
50th-Percentile Queue Length [ft]	6.53	88.27	87.62	12.49	120.13	119.78	75.12	70.70
95th-Percentile Queue Length [veh]	0.47	6.36	6.31	0.90	8.40	8.38	5.41	5.09
95th-Percentile Queue Length [ft]	11.75	158.88	157.71	22.48	210.01	209.52	135.22	127.27

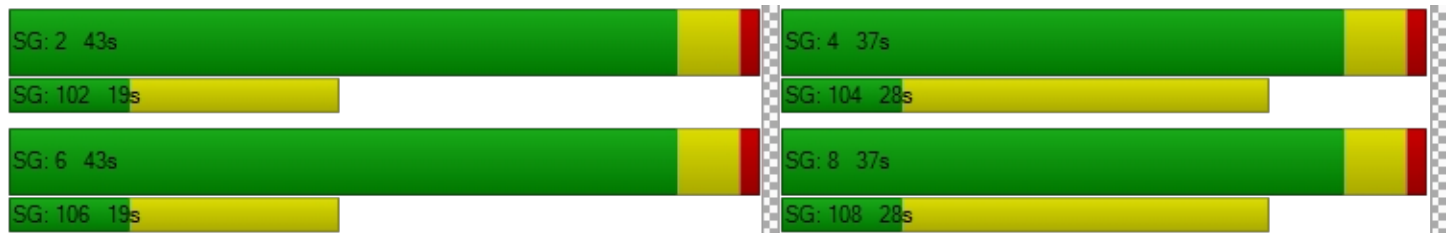


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.92	6.47	6.49	10.60	7.57	7.60	29.97	29.97	29.97	29.55	29.55	29.55
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	6.58			7.68			29.97			29.55		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	9.76											
Intersection LOS	A											
Intersection V/C	0.497											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	31	741	23	40	1291	33	50	81	32	82	116	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	741	23	40	1291	33	50	81	32	82	116	39
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	212	7	11	347	9	18	29	12	25	35	12
Total Analysis Volume [veh/h]	35	846	26	43	1389	36	72	117	46	100	141	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.09	0.23	0.23	0.07	0.38	0.38	0.17	0.20
s, saturation flow rate [veh/h]	382	1900	1873	643	1900	1878	1409	1406
c, Capacity [veh/h]	229	1174	1157	399	1174	1161	435	436
d1, Uniform Delay [s]	17.75	7.58	7.59	11.58	9.35	9.38	25.12	26.95
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.41	0.91	0.93	0.54	2.35	2.41	0.39	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

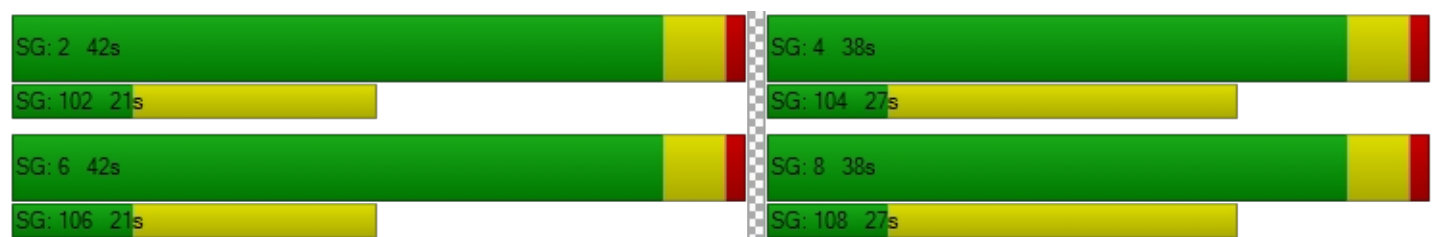
X, volume / capacity	0.15	0.37	0.37	0.11	0.61	0.61	0.54	0.66
d, Delay for Lane Group [s/veh]	19.16	8.49	8.52	12.12	11.71	11.79	25.51	27.60
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.52	3.50	3.47	0.46	7.21	7.20	3.70	4.91
50th-Percentile Queue Length [ft]	13.08	87.52	86.83	11.52	180.33	179.97	92.38	122.86
95th-Percentile Queue Length [veh]	0.94	6.30	6.25	0.83	11.62	11.60	6.65	8.55
95th-Percentile Queue Length [ft]	23.54	157.54	156.30	20.73	290.45	289.97	166.28	213.74

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.16	8.51	8.52	12.12	11.75	11.79	25.51	25.51	25.51	27.60	27.60	27.60
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.92			11.76			25.51			27.60		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	13.56											
Intersection LOS	B											
Intersection V/C	0.583											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	40	1050	34	23	1236	103	40	113	17	182	97	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1050	34	23	1236	103	40	113	17	182	97	28
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	302	10	6	329	27	12	33	5	49	26	8
Total Analysis Volume [veh/h]	46	1207	39	25	1318	110	46	130	20	197	105	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	47	47	47	47	47	47	24	24	24	24
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.59	0.59	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.12	0.33	0.33	0.06	0.38	0.38	0.23	0.01	0.23	0.02
s, saturation flow rate [veh/h]	381	1900	1875	453	1900	1836	760	1566	1300	1562
c, Capacity [veh/h]	207	1111	1096	254	1111	1073	285	470	465	469
d1, Uniform Delay [s]	21.76	10.29	10.31	17.23	11.12	11.22	23.32	19.83	25.50	19.96
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.07	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.45	2.07	2.11	0.77	2.95	3.17	1.35	0.01	0.98	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.22	0.56	0.57	0.10	0.65	0.66	0.62	0.04	0.65	0.06
d, Delay for Lane Group [s/veh]	24.22	12.36	12.42	18.00	14.07	14.39	24.68	19.84	26.48	19.98
Lane Group LOS	C	B	B	B	B	B	C	B	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.78	6.33	6.29	0.35	8.00	7.95	2.52	0.25	5.03	0.38
50th-Percentile Queue Length [ft]	19.54	158.29	157.24	8.67	199.96	198.73	63.09	6.35	125.67	9.59
95th-Percentile Queue Length [veh]	1.41	10.46	10.40	0.62	12.64	12.57	4.54	0.46	8.70	0.69
95th-Percentile Queue Length [ft]	35.17	261.46	260.06	15.60	315.91	314.33	113.56	11.44	217.59	17.27

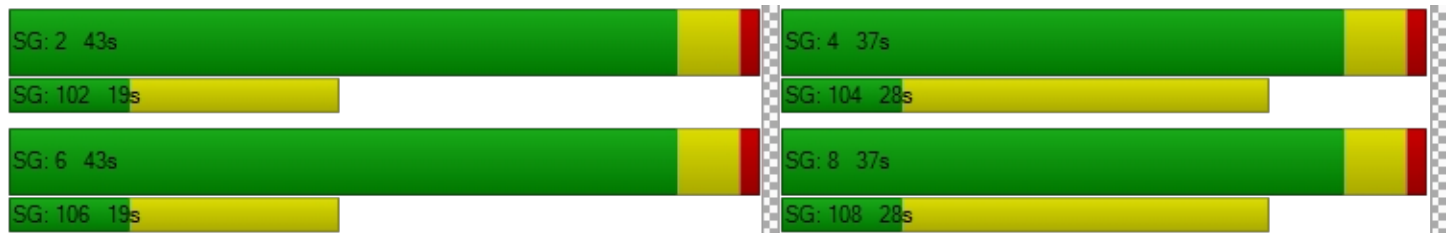


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.22	12.39	12.42	18.00	14.21	14.39	24.68	24.68	19.84	26.48	26.48	19.98
Movement LOS	C	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.81			14.29			24.18			25.89		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.48											
Intersection LOS	B											
Intersection V/C	0.617											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1251	111	70	1453	168	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1251	111	70	1453	168	86
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	332	29	19	384	44	23
Total Analysis Volume [veh/h]	1326	118	74	1538	177	91
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	69	69	12	12
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.13	0.13
(v / s)_j Volume / Saturation Flow Rate	0.39	0.40	0.20	0.43	0.10	0.06
s, saturation flow rate [veh/h]	1863	1800	368	3547	1772	1556
c, Capacity [veh/h]	1432	1385	293	2727	228	200
d1, Uniform Delay [s]	3.91	4.00	9.95	4.23	37.90	36.23
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	1.41	2.06	0.85	5.63	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

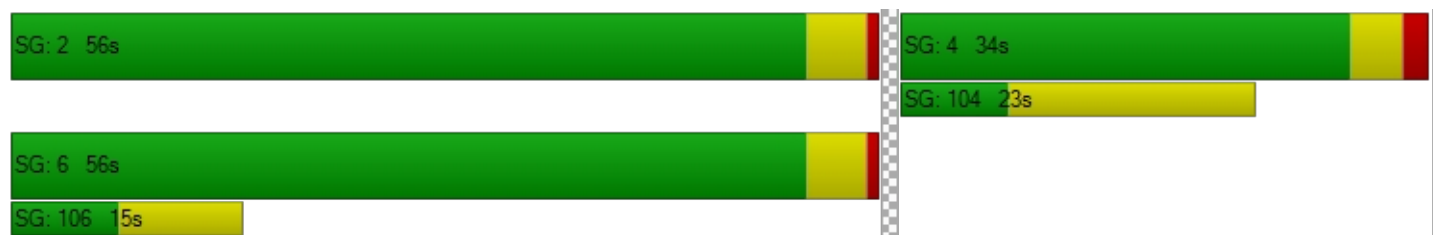
X, volume / capacity	0.50	0.52	0.25	0.56	0.78	0.45
d, Delay for Lane Group [s/veh]	5.18	5.41	12.01	5.08	43.53	37.84
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.63	3.74	0.87	4.23	4.03	1.89
50th-Percentile Queue Length [ft]	90.87	93.52	21.82	105.84	100.64	47.32
95th-Percentile Queue Length [veh]	6.54	6.73	1.57	7.61	7.25	3.41
95th-Percentile Queue Length [ft]	163.56	168.34	39.28	190.20	181.14	85.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.29	5.41	12.01	5.08	43.53	37.84
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	5.30		5.40		41.60	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.27					
Intersection LOS	A					
Intersection V/C	0.534					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	47	828	71	75	1342	51	107	267	50	63	173	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	828	71	75	1342	51	107	267	50	63	173	2
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	225	19	21	373	14	30	76	14	18	49	1
Total Analysis Volume [veh/h]	51	900	77	83	1492	57	121	302	57	71	195	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	21	21
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.15	0.26	0.26	0.14	0.41	0.41	0.30	0.19
s, saturation flow rate [veh/h]	339	1900	1835	584	1900	1865	1590	1375
c, Capacity [veh/h]	161	953	920	291	953	935	624	550
d1, Uniform Delay [s]	27.04	10.07	10.10	17.45	12.60	12.70	18.32	15.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.23	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.08	2.03	2.13	2.44	7.66	8.22	4.25	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.32	0.52	0.52	0.28	0.82	0.83	0.77	0.49
d, Delay for Lane Group [s/veh]	32.12	12.10	12.23	19.90	20.26	20.92	22.57	15.27
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.93	4.17	4.09	1.06	9.16	9.28	6.11	2.47
50th-Percentile Queue Length [ft]	23.25	104.28	102.22	26.46	229.08	231.99	152.76	61.73
95th-Percentile Queue Length [veh]	1.67	7.51	7.36	1.90	14.13	14.28	10.16	4.44
95th-Percentile Queue Length [ft]	41.85	187.71	184.00	47.62	353.19	356.89	254.10	111.11

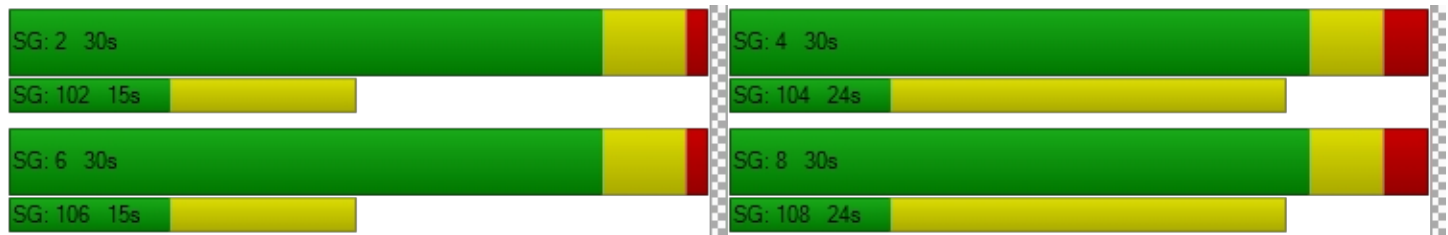


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.12	12.15	12.23	19.90	20.57	20.92	22.57	22.57	22.57	15.27	15.27	15.27
Movement LOS	C	B	B	B	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.15			20.55			22.57			15.27		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	18.19											
Intersection LOS	B											
Intersection V/C	0.716											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	16	131	97	53	174	27	114	356	41	9	292	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	131	97	53	174	27	114	356	41	9	292	34
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	38	28	16	52	8	34	106	12	2	78	9
Total Analysis Volume [veh/h]	19	152	113	63	208	32	136	424	49	10	314	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	16	16	35	35
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.58	0.58
(v / s)_j Volume / Saturation Flow Rate	0.02	0.16	0.06	0.11	0.02	0.37	0.20
s, saturation flow rate [veh/h]	1186	1696	1101	1863	1528	1647	1842
c, Capacity [veh/h]	283	459	223	504	413	1022	1123
d1, Uniform Delay [s]	22.68	18.92	26.17	17.97	16.31	8.10	6.69
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	1.15	0.69	0.54	0.08	2.56	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

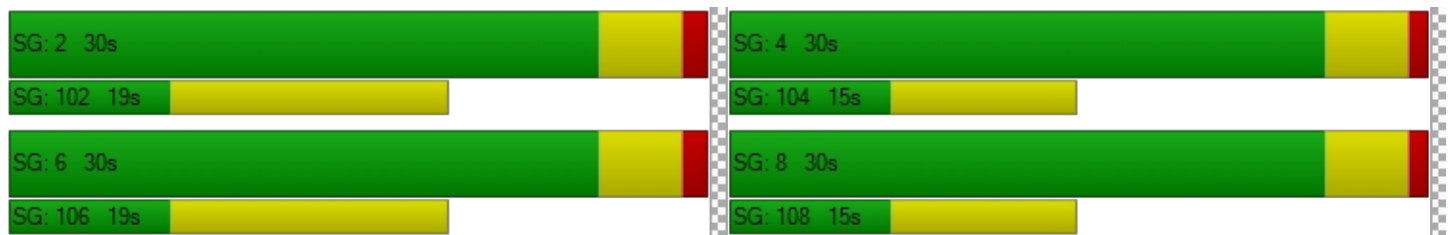
X, volume / capacity	0.07	0.58	0.28	0.41	0.08	0.60	0.32
d, Delay for Lane Group [s/veh]	22.78	20.08	26.86	18.51	16.39	10.66	7.45
Lane Group LOS	C	C	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.23	3.00	0.86	2.25	0.31	4.28	2.00
50th-Percentile Queue Length [ft]	5.64	74.88	21.53	56.31	7.82	106.94	49.99
95th-Percentile Queue Length [veh]	0.41	5.39	1.55	4.05	0.56	7.67	3.60
95th-Percentile Queue Length [ft]	10.16	134.79	38.76	101.35	14.08	191.73	89.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.78	20.08	20.08	26.86	18.51	16.39	10.66	10.66	10.66	7.45	7.45	7.45
Movement LOS	C	C	C	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	20.26			20.02			10.66			7.45		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	13.49											
Intersection LOS	B											
Intersection V/C	0.526											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	707	3	139	3	2	7	10	761	347	144	1356	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	707	3	139	3	2	7	10	761	347	144	1356	12
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	185	1	36	1	1	2	3	208	95	41	388	3
Total Analysis Volume [veh/h]	739	3	145	4	3	9	11	833	380	165	1553	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	4	67	67	107	67	67	67
g / C, Green / Cycle	0.29	0.29	0.03	0.56	0.56	0.89	0.56	0.56	0.56
(v / s)_j Volume / Saturation Flow Rate	0.25	0.26	0.01	0.03	0.16	0.24	0.25	0.28	0.28
s, saturation flow rate [veh/h]	1810	1706	1675	327	5176	1594	669	3618	1890
c, Capacity [veh/h]	528	498	52	180	2908	1417	366	2033	1062
d1, Uniform Delay [s]	40.02	40.37	56.77	24.78	13.70	0.97	23.37	16.07	16.07
k, delay calibration	0.15	0.16	0.11	0.50	0.50	0.13	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	7.20	3.25	0.65	0.25	0.12	3.97	0.90	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.88	0.31	0.06	0.29	0.27	0.45	0.51	0.51
d, Delay for Lane Group [s/veh]	45.45	47.57	60.02	25.43	13.95	1.09	27.34	16.97	17.80
Lane Group LOS	D	D	E	C	B	A	C	B	B
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	13.22	13.12	0.52	0.24	3.87	0.34	3.68	8.52	9.15
50th-Percentile Queue Length [ft]	330.43	327.98	13.05	5.92	96.73	8.53	91.97	212.90	228.81
95th-Percentile Queue Length [veh]	19.18	19.06	0.94	0.43	6.96	0.61	6.62	13.30	14.11
95th-Percentile Queue Length [ft]	479.49	476.48	23.49	10.66	174.11	15.35	165.54	332.55	352.84

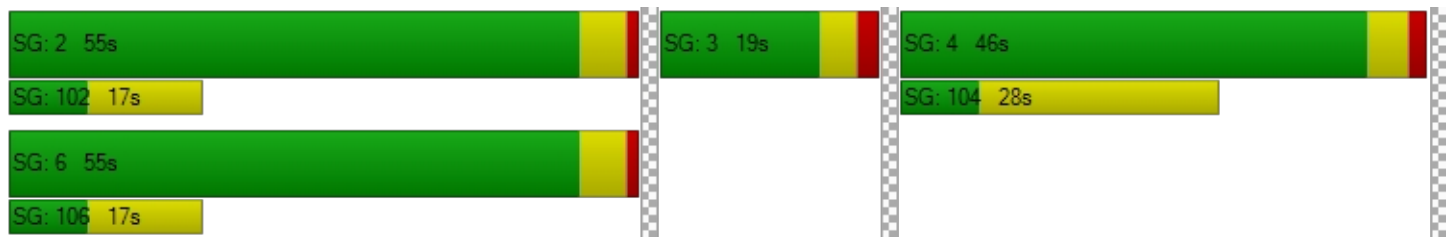


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	46.28	47.57	47.57	60.02	60.02	60.02	25.43	13.95	1.09	27.34	17.25	17.80
Movement LOS	D	D	D	E	E	E	C	B	A	C	B	B
d_A, Approach Delay [s/veh]	46.49			60.02			10.06			18.22		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]	22.30											
Intersection LOS	C											
Intersection V/C	0.550											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	12	166	84	34	164	33	45	109	33	24	185	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	166	84	34	164	33	45	109	33	24	185	25
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	51	26	10	47	9	13	31	9	7	51	7
Total Analysis Volume [veh/h]	15	205	104	39	187	38	51	124	37	26	202	27
Pedestrian Volume [ped/h]	17			9			15			28		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	630	606	585	593
Degree of Utilization, x	0.51	0.44	0.36	0.43

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.95	2.21	1.65	2.15
95th-Percentile Queue Length [ft]	73.72	55.14	41.17	53.81
Approach Delay [s/veh]	14.60	13.46	12.61	13.57
Approach LOS	B	B	B	B
Intersection Delay [s/veh]	13.67			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST) / MONTANA AVENUE \ (102)**

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	591	489	29	71	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	591	489	29	71	12
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	178	135	8	21	4
Total Analysis Volume [veh/h]	12	712	540	32	86	14
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	10	3
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.15
(v / s)_j Volume / Saturation Flow Rate	0.01	0.20	0.28	0.02	0.06
s, saturation flow rate [veh/h]	873	3618	1900	1576	1780
c, Capacity [veh/h]	432	1560	819	679	270
d1, Uniform Delay [s]	8.64	4.44	4.99	3.64	8.41
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.08	0.34	0.01	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

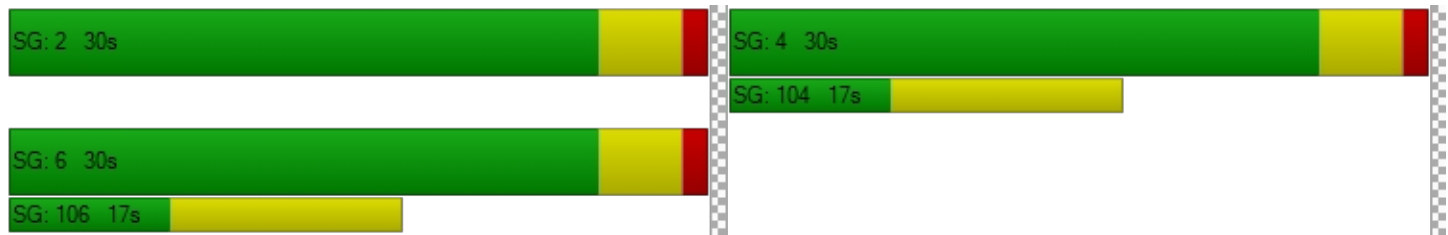
X, volume / capacity	0.03	0.46	0.66	0.05	0.37
d, Delay for Lane Group [s/veh]	8.65	4.52	5.33	3.65	8.72
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.03	0.27	0.52	0.02	0.29
50th-Percentile Queue Length [ft]	0.78	6.87	12.92	0.53	7.36
95th-Percentile Queue Length [veh]	0.06	0.49	0.93	0.04	0.53
95th-Percentile Queue Length [ft]	1.41	12.37	23.26	0.95	13.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.65	4.52	5.33	3.65	8.72	8.72
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.59		5.23		8.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.15					
Intersection LOS	A					
Intersection V/C	0.340					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

**Intersection Setup**

Name	Northbound			Olympic Blvd			OI BI			Ce Av		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Olympic Blvd			OI BI			Ce Av		
Base Volume Input [veh/h]	0	0	0	43	876	0	0	1653	719	525	0	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	43	876	0	0	1653	719	525	0	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	13	263	0	0	433	189	162	0	15
Total Analysis Volume [veh/h]	0	0	0	52	1052	0	0	1734	754	650	0	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		61	61	61	61	61	61	20	20
g / C, Green / Cycle		0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate		0.18	0.28	0.28	0.00	0.48	0.47	0.18	0.04
s, saturation flow rate [veh/h]		284	1900	1900	534	3618	1615	3514	1583
c, Capacity [veh/h]		176	1279	1279	356	2435	1087	789	355
d1, Uniform Delay [s]		24.19	6.64	6.64	0.00	9.22	9.00	33.15	28.12
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		4.25	0.98	0.98	0.00	1.80	3.65	2.24	0.23
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

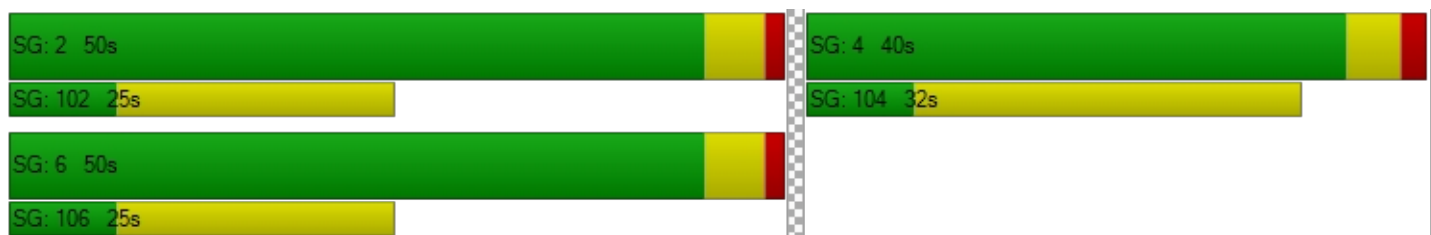
X, volume / capacity		0.30	0.41	0.41	0.00	0.71	0.69	0.82	0.17
d, Delay for Lane Group [s/veh]		28.44	7.62	7.62	0.00	11.02	12.66	35.39	28.35
Lane Group LOS		C	A	A	A	B	B	D	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.16	5.17	5.17	0.00	9.03	8.25	6.73	1.07
50th-Percentile Queue Length [ft]		29.09	129.19	129.19	0.00	225.75	206.36	168.19	26.79
95th-Percentile Queue Length [veh]		2.09	8.90	8.90	0.00	13.96	12.97	10.98	1.93
95th-Percentile Queue Length [ft]		52.36	222.39	222.39	0.00	348.96	324.16	274.54	48.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	28.44	7.62	7.62	0.00	11.02	12.66	35.39	28.35	28.35
Movement LOS				C	A	A	A	B	B	D	C	C
d_A, Approach Delay [s/veh]	0.00			8.60			11.52			34.78		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.62											
Intersection LOS	B											
Intersection V/C	0.664											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	68.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.734

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	520	352	393	0	453	337	0	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	520	352	393	0	453	337	0	140
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	141	95	106	0	122	90	0	37
Total Analysis Volume [veh/h]	0	0	0	0	563	381	424	0	488	359	0	149
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	51	32	32
g / C, Green / Cycle		0.33	0.54	0.16	0.57	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.31	0.24	0.23	0.26	0.19	0.09
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		601	889	290	1075	673	572
d1, Uniform Delay [s]		29.15	11.91	37.79	11.43	23.15	20.68
k, delay calibration		0.39	0.45	0.45	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		20.21	1.37	223.76	1.39	3.02	1.10
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

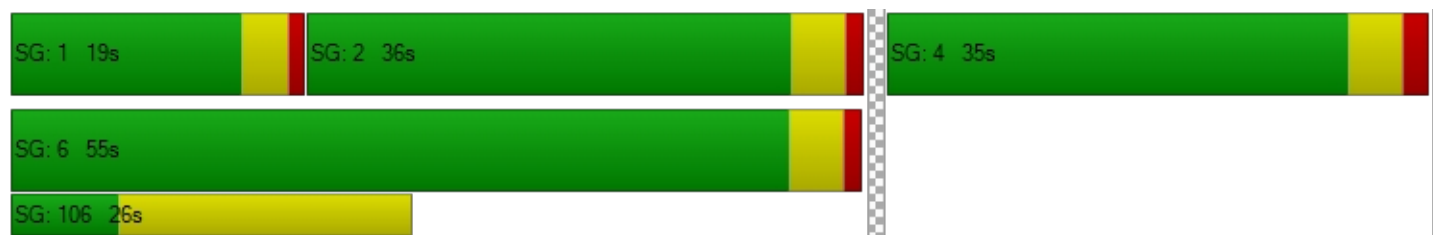
X, volume / capacity		0.94	0.43	1.46	0.45	0.53	0.26
d, Delay for Lane Group [s/veh]		49.35	13.28	261.55	12.81	26.16	21.79
Lane Group LOS		D	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		15.03	4.73	24.30	5.65	6.43	2.35
50th-Percentile Queue Length [ft]		375.83	118.36	607.49	141.27	160.82	58.80
95th-Percentile Queue Length [veh]		21.39	8.30	37.79	9.55	10.59	4.23
95th-Percentile Queue Length [ft]		534.80	207.57	944.67	238.74	264.80	105.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	49.35	13.28	261.55	0.00	12.81	26.16	0.00	21.79
Movement LOS					D	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			34.79			128.45			24.88		
Approach LOS	A			C			F			C		
d_I, Intersection Delay [s/veh]	68.80											
Intersection LOS	E											
Intersection V/C	0.734											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	60	127	83	155	187	1	66	913	45	0	897	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	127	83	155	187	1	66	913	45	0	897	69
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	36	23	49	59	0	17	241	12	0	240	18
Total Analysis Volume [veh/h]	68	143	93	195	236	1	70	963	47	0	961	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	53	53	53	53	53
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.07	0.09	0.07	0.18	0.14	0.14	0.21	0.21	0.31	0.32
s, saturation flow rate [veh/h]	1016	1676	1338	1088	1675	487	3192	1625	1676	1622
c, Capacity [veh/h]	250	516	412	316	516	266	1883	959	989	957
d1, Uniform Delay [s]	33.45	23.56	23.17	33.60	25.11	20.07	9.57	9.59	10.95	11.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	0.29	0.28	1.95	0.64	2.40	0.52	1.04	1.98	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.27	0.28	0.23	0.62	0.46	0.26	0.35	0.36	0.52	0.54
d, Delay for Lane Group [s/veh]	34.03	23.85	23.44	35.55	25.75	22.46	10.09	10.63	12.93	13.31
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.35	2.30	1.47	4.14	4.08	1.20	3.24	3.47	6.04	6.17
50th-Percentile Queue Length [ft]	33.72	57.47	36.87	103.52	101.94	30.06	80.92	86.72	151.12	154.17
95th-Percentile Queue Length [veh]	2.43	4.14	2.65	7.45	7.34	2.16	5.83	6.24	10.08	10.24
95th-Percentile Queue Length [ft]	60.70	103.44	66.36	186.34	183.49	54.11	145.65	156.09	251.92	255.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.03	23.85	23.44	35.55	25.75	25.75	22.46	10.26	10.63	0.00	13.10	13.31
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	26.00			30.17			11.07			13.12		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.30											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	91	1019	103	86	1194	68	212	599	73	125	521	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	1019	103	86	1194	68	212	599	73	125	521	72
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	264	27	23	318	18	56	157	19	33	139	19
Total Analysis Volume [veh/h]	94	1055	107	92	1272	72	223	629	77	134	557	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	38	38	46	38	38	35	24	24	35	21	21
g / C, Green / Cycle	0.51	0.42	0.42	0.51	0.42	0.42	0.39	0.27	0.27	0.39	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.15	0.30	0.07	0.13	0.36	0.05	0.20	0.19	0.19	0.14	0.17	0.17
s, saturation flow rate [veh/h]	626	3547	1562	710	3547	1563	1131	1900	1794	991	1900	1779
c, Capacity [veh/h]	294	1475	650	346	1474	650	432	514	485	375	438	410
d1, Uniform Delay [s]	18.06	21.88	16.50	15.13	23.99	16.13	21.24	29.60	29.73	20.25	32.14	32.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.12	0.13	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.86	2.99	0.55	1.87	6.91	0.35	4.37	1.95	2.33	0.58	2.45	2.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

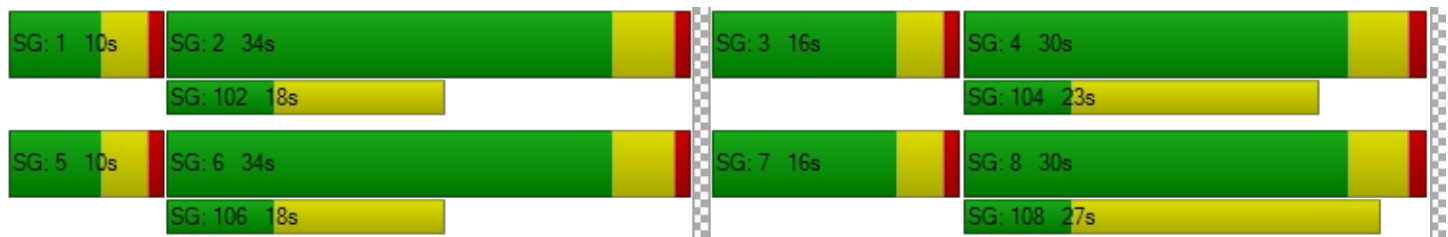
X, volume / capacity	0.32	0.72	0.16	0.27	0.86	0.11	0.52	0.70	0.71	0.36	0.74	0.76
d, Delay for Lane Group [s/veh]	20.92	24.87	17.05	17.00	30.90	16.47	25.61	31.54	32.06	20.82	34.59	35.18
Lane Group LOS	C	C	B	B	C	B	C	C	C	C	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.17	9.40	1.44	1.10	13.03	0.95	3.68	7.00	6.81	1.88	6.68	6.49
50th-Percentile Queue Length [ft]	29.27	235.10	36.08	27.41	325.76	23.66	91.89	175.04	170.34	47.09	167.08	162.20
95th-Percentile Queue Length [veh]	2.11	14.43	2.60	1.97	18.95	1.70	6.62	11.34	11.09	3.39	10.92	10.67
95th-Percentile Queue Length [ft]	52.68	360.83	64.95	49.34	473.76	42.59	165.40	283.53	277.36	84.77	273.08	266.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.92	24.87	17.05	17.00	30.90	16.47	25.61	31.77	32.06	20.82	34.84	35.18
Movement LOS	C	C	B	B	C	B	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	23.91			29.28			30.31			32.43		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.51											
Intersection LOS	C											
Intersection V/C	0.658											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	33	722	161	0	1140	128	141	783	50	92	803	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	722	161	0	1140	128	141	783	50	92	803	63
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	183	41	0	308	35	37	204	13	25	217	17
Total Analysis Volume [veh/h]	33	731	163	0	1234	138	147	817	52	99	868	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	47	47	47	47	47	47
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.52	0.52	0.52	0.52	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.08	0.25	0.25	0.26	0.27	0.24	0.23	0.03	0.15	0.25	0.25
s, saturation flow rate [veh/h]	400	1863	1711	3547	1711	604	3618	1523	664	1900	1825
c, Capacity [veh/h]	133	702	645	1337	645	281	1884	794	316	990	951
d1, Uniform Delay [s]	37.02	23.23	23.39	23.55	23.85	26.49	13.34	10.69	21.97	13.76	13.83
k, delay calibration	0.11	0.13	0.13	0.11	0.16	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.97	1.23	1.52	0.63	2.12	6.83	0.73	0.16	2.58	1.66	1.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	0.66	0.67	0.68	0.71	0.52	0.43	0.07	0.31	0.48	0.49
d, Delay for Lane Group [s/veh]	37.99	24.46	24.91	24.17	25.97	33.32	14.07	10.85	24.54	15.42	15.61
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.71	8.03	7.63	7.94	8.31	3.21	4.99	0.52	1.74	6.05	5.95
50th-Percentile Queue Length [ft]	17.83	200.72	190.68	198.59	207.69	80.32	124.63	13.11	43.45	151.28	148.75
95th-Percentile Queue Length [veh]	1.28	12.68	12.16	12.57	13.03	5.78	8.65	0.94	3.13	10.09	9.95
95th-Percentile Queue Length [ft]	32.10	316.89	303.91	314.15	325.86	144.57	216.17	23.59	78.21	252.14	248.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.99	24.62	24.91	0.00	24.64	25.97	33.32	14.07	10.85	24.54	15.51	15.61
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.15			24.77			16.69			16.38		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.97											
Intersection LOS	C											
Intersection V/C	0.520											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	53.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	106	741	94	187	1179	292	152	936	153	273	801	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	741	94	187	1179	292	152	936	153	273	801	120
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	201	25	52	325	80	39	239	39	71	209	31
Total Analysis Volume [veh/h]	115	803	102	206	1300	322	155	956	156	285	837	125
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	43	59	10	44	61	12	36	51	12	37	37
g / C, Green / Cycle	0.07	0.36	0.49	0.08	0.37	0.51	0.10	0.30	0.43	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.06	0.16	0.06	0.06	0.26	0.21	0.09	0.26	0.11	0.16	0.23	0.08
s, saturation flow rate [veh/h]	1810	5074	1574	3445	5074	1520	1810	3618	1428	1774	3618	1516
c, Capacity [veh/h]	134	1802	780	291	1855	779	176	1099	616	184	1122	470
d1, Uniform Delay [s]	54.99	29.67	16.35	53.56	32.52	18.14	53.58	39.59	21.80	53.86	37.19	31.16
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.17	0.20	0.30	0.50	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.19	0.80	0.35	3.16	2.24	1.62	19.69	4.13	0.60	273.78	2.14	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.45	0.13	0.71	0.70	0.41	0.88	0.87	0.25	1.55	0.75	0.27
d, Delay for Lane Group [s/veh]	69.18	30.47	16.70	56.72	34.76	19.76	73.27	43.72	22.40	327.65	39.33	31.80
Lane Group LOS	E	C	B	E	C	B	E	D	C	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.94	5.98	1.57	3.16	11.03	5.81	5.54	13.70	2.88	19.44	11.16	2.79
50th-Percentile Queue Length [ft]	98.53	149.52	39.28	78.95	275.64	145.34	138.50	342.48	71.99	486.10	279.10	69.84
95th-Percentile Queue Length [veh]	7.09	9.99	2.83	5.68	16.47	9.77	9.40	19.77	5.18	30.83	16.64	5.03
95th-Percentile Queue Length [ft]	177.35	249.79	70.71	142.11	411.79	244.20	235.00	494.23	129.59	770.80	416.10	125.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	69.18	30.47	16.70	56.72	34.76	19.76	73.27	43.72	22.40	327.65	39.33	31.80
Movement LOS	E	C	B	E	C	B	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	33.46			34.59			44.71			104.47		
Approach LOS	C			C			D			F		
d_I, Intersection Delay [s/veh]	53.02											
Intersection LOS	D											
Intersection V/C	0.745											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	948	510	532	989
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	948	510	532	989
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	244	131	145	270
Total Analysis Volume [veh/h]	0	0	975	525	581	1079
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	44	44	37	85
g / C, Green / Cycle	0.49	0.49	0.41	0.95
(v / s)_i Volume / Saturation Flow Rate	0.31	0.37	0.36	0.34
s, saturation flow rate [veh/h]	3192	1422	1597	3192
c, Capacity [veh/h]	1565	697	650	3025
d1, Uniform Delay [s]	16.81	18.51	24.83	0.19
k, delay calibration	0.50	0.50	0.20	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	7.37	8.09	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.62	0.75	0.89	0.36
d, Delay for Lane Group [s/veh]	18.69	25.88	32.92	0.52
Lane Group LOS	B	C	C	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	7.31	9.62	12.16	0.14
50th-Percentile Queue Length [ft]	182.86	240.42	303.93	3.46
95th-Percentile Queue Length [veh]	11.75	14.70	17.88	0.25
95th-Percentile Queue Length [ft]	293.75	367.56	446.88	6.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	18.69	25.88	32.92	0.52
Movement LOS			B	C	C	A
d_A, Approach Delay [s/veh]	0.00		21.21		11.86	
Approach LOS	A		C		B	
d_I, Intersection Delay [s/veh]	16.29					
Intersection LOS	B					
Intersection V/C	0.733					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	72	1259	31	51	1312	63	101	316	117	175	291	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1259	31	51	1312	63	101	316	117	175	291	69
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	341	8	14	364	17	29	89	33	46	77	18
Total Analysis Volume [veh/h]	78	1364	34	57	1457	70	114	357	132	186	309	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	82	82	82	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.54	0.54	0.54	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.24	0.43	0.02	0.11	0.46	0.05	0.13	0.11	0.10	0.20	0.12	0.13
s, saturation flow rate [veh/h]	327	3192	1425	509	3192	1384	873	3192	1352	908	1676	1454
c, Capacity [veh/h]	121	1738	776	271	2030	880	212	966	409	231	508	440
d1, Uniform Delay [s]	59.16	27.14	15.92	21.03	18.28	10.46	56.92	41.03	40.38	60.08	41.27	41.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.23	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.33	3.64	0.11	1.76	2.22	0.18	2.13	0.24	0.45	12.70	0.48	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.78	0.04	0.21	0.72	0.08	0.54	0.37	0.32	0.81	0.39	0.42
d, Delay for Lane Group [s/veh]	82.50	30.77	16.03	22.79	20.50	10.64	59.05	41.26	40.83	72.78	41.75	42.42
Lane Group LOS	F	C	B	C	C	B	E	D	D	E	D	D
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.80	20.02	0.58	0.87	17.08	0.95	4.18	5.29	3.88	7.92	5.88	5.65
50th-Percentile Queue Length [ft]	95.01	500.60	14.57	21.79	427.05	23.71	104.62	132.23	96.95	197.98	147.12	141.17
95th-Percentile Queue Length [veh]	6.84	27.36	1.05	1.57	23.86	1.71	7.53	9.06	6.98	12.53	9.86	9.54
95th-Percentile Queue Length [ft]	171.01	684.06	26.23	39.22	596.50	42.68	188.31	226.52	174.50	313.36	246.58	238.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	82.50	30.77	16.03	22.79	20.50	10.64	59.05	41.26	40.83	72.78	41.99	42.42
Movement LOS	F	C	B	C	C	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	33.17			20.14			44.53			52.13		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.46											
Intersection LOS	C											
Intersection V/C	0.661											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	38	1082	103	57	1417	67	115	465	51	102	444	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	1082	103	57	1417	67	115	465	51	102	444	78
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	275	26	15	381	18	30	119	13	26	113	20
Total Analysis Volume [veh/h]	39	1101	105	61	1523	72	118	478	52	104	453	80
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	51	51	51	51	51
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.14	0.25	0.25	0.15	0.33	0.33	0.15	0.29	0.04	0.13	0.33
s, saturation flow rate [veh/h]	286	3192	1595	415	3192	1634	781	1676	1402	821	1629
c, Capacity [veh/h]	116	1435	717	174	1435	734	198	783	655	245	761
d1, Uniform Delay [s]	42.99	22.27	22.31	35.16	24.89	24.92	44.63	21.87	16.23	38.47	23.23
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.04	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.58	1.58	3.18	5.48	3.38	6.50	1.06	0.65	0.02	0.43	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.56	0.56	0.35	0.73	0.74	0.60	0.61	0.08	0.42	0.70
d, Delay for Lane Group [s/veh]	50.57	23.85	25.49	40.64	28.26	31.42	45.69	22.51	16.25	38.90	25.04
Lane Group LOS	D	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.25	7.78	8.15	1.67	11.63	12.60	3.18	9.11	0.73	2.53	11.01
50th-Percentile Queue Length [ft]	31.21	194.58	203.87	41.79	290.83	314.88	79.59	227.70	18.19	63.26	275.14
95th-Percentile Queue Length [veh]	2.25	12.36	12.84	3.01	17.23	18.42	5.73	14.06	1.31	4.55	16.45
95th-Percentile Queue Length [ft]	56.18	308.97	320.96	75.22	430.67	460.38	143.26	351.43	32.75	113.87	411.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	50.57	24.29	25.49	40.64	29.24	31.42	45.69	22.51	16.25	38.90	25.04	25.04
Movement LOS	D	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	25.22			29.75			26.23			27.30		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.48											
Intersection LOS	C											
Intersection V/C	0.658											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	80.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	57	391	282	154	686	51	460	1355	321	21	690	273
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	391	282	154	686	51	460	1355	321	21	690	273
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	111	80	47	209	16	123	361	86	6	193	76
Total Analysis Volume [veh/h]	65	446	321	187	835	62	490	1444	342	23	771	305
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	55	40	60	55	36	36	55	49	49	55	35	55
g / C, Green / Cycle	0.46	0.33	0.50	0.46	0.30	0.30	0.46	0.41	0.41	0.46	0.30	0.46
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.20	0.17	0.28	0.28	0.46	0.47	0.51	0.06	0.21	0.19
s, saturation flow rate [veh/h]	927	3080	1572	1085	1618	1574	1067	1900	1766	393	3618	1579
c, Capacity [veh/h]	339	1027	794	477	484	471	449	772	717	163	1069	730
d1, Uniform Delay [s]	24.04	31.18	18.47	21.64	40.95	41.01	40.00	35.64	35.64	28.53	37.87	21.51
k, delay calibration	0.11	0.11	0.50	0.15	0.42	0.42	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.29	1.53	0.72	24.76	25.82	69.39	85.03	121.79	1.80	4.22	1.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.43	0.40	0.39	0.94	0.94	1.09	1.16	1.24	0.14	0.72	0.42
d, Delay for Lane Group [s/veh]	24.31	31.47	20.00	22.35	65.71	66.82	109.39	120.67	157.43	30.33	42.09	23.26
Lane Group LOS	C	C	B	C	E	E	F	F	F	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.06	5.02	5.73	3.38	16.24	16.00	17.50	39.62	44.15	0.43	10.62	5.96
50th-Percentile Queue Length [ft]	26.41	125.49	143.24	84.46	406.11	400.05	437.38	990.57	1103.83	10.79	265.38	148.98
95th-Percentile Queue Length [veh]	1.90	8.69	9.66	6.08	22.85	22.56	25.88	55.31	63.63	0.78	15.96	9.96
95th-Percentile Queue Length [ft]	47.54	217.35	241.38	152.03	571.36	564.06	647.05	1382.76	1590.82	19.42	398.96	249.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.31	31.47	20.00	22.35	66.22	66.82	109.39	134.70	157.43	30.33	42.09	23.26
Movement LOS	C	C	B	C	E	E	F	F	F	C	D	C
d_A, Approach Delay [s/veh]	26.49			58.69			132.67			36.62		
Approach LOS	C			E			F			D		
d_I, Intersection Delay [s/veh]	80.86											
Intersection LOS	F											
Intersection V/C	0.823											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	24	78	78	45	86	54	65	840	20	14	749	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	78	78	45	86	54	65	840	20	14	749	11
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	23	23	13	25	15	18	232	6	4	199	3
Total Analysis Volume [veh/h]	28	92	92	52	99	62	72	926	22	15	797	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	63	63	63	63
g / C, Green / Cycle	0.20	0.20	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.15	0.18	0.35	0.35	0.26	0.26
s, saturation flow rate [veh/h]	1385	1186	1392	1511	1628	1515
c, Capacity [veh/h]	320	285	1019	1057	1180	1059
d1, Uniform Delay [s]	33.76	34.72	5.74	6.28	5.46	5.52
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.34	3.89	1.62	1.71	0.86	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.66	0.75	0.48	0.50	0.36	0.38
d, Delay for Lane Group [s/veh]	36.10	38.61	7.36	7.99	6.32	6.53
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.47	4.78	3.51	4.13	2.81	2.68
50th-Percentile Queue Length [ft]	111.68	119.40	87.72	103.24	70.36	67.09
95th-Percentile Queue Length [veh]	7.93	8.36	6.32	7.43	5.07	4.83
95th-Percentile Queue Length [ft]	198.34	209.00	157.90	185.83	126.65	120.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.10	36.10	36.10	38.61	38.61	38.61	7.36	7.70	7.99	6.32	6.42	6.53
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	36.10			38.61			7.69			6.42		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.79											
Intersection LOS	B											
Intersection V/C	0.531											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	27.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.165

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗ ↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	599	516	0	28	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	599	516	0	28	27
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	158	142	0	8	8
Total Analysis Volume [veh/h]	0	631	568	0	32	31
Pedestrian Volume [ped/h]	6		5		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.16	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	27.19	12.78
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.58	0.20
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	14.41	5.01
d_A, Approach Delay [s/veh]	0.00		0.00		20.10	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.00					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	29.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.217

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	584	540	0	22	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	584	540	0	22	48
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	157	149	0	10	23
Total Analysis Volume [veh/h]	0	628	596	0	41	91
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.22	0.20
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	29.30	14.58
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.80	0.72
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	19.96	17.91
d_A, Approach Delay [s/veh]	0.00		0.00		19.15	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.86					
Intersection LOS	D					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.384

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	22	255	9	5	213	26	2	0	0	6	5	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	255	9	5	213	26	2	0	0	6	5	15
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	72	3	1	56	7	2	0	0	2	2	5
Total Analysis Volume [veh/h]	25	289	10	5	223	27	8	0	0	8	7	21
Pedestrian Volume [ped/h]	33			30			12			7		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	843	840	665	741
Degree of Utilization, x	0.38	0.30	0.01	0.05

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	1.82	1.28	0.04	0.15
95th-Percentile Queue Length [ft]	45.55	32.10	0.91	3.82
Approach Delay [s/veh]	9.91	9.14	8.48	8.11
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.47			
Intersection LOS	A			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.415

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	21	245	0	2	211	25	3	2	2	17	0	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	245	0	2	211	25	3	2	2	17	0	45
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	76	0	1	56	7	2	1	1	7	0	17
Total Analysis Volume [veh/h]	26	306	0	2	223	26	9	6	6	26	0	70
Pedestrian Volume [ped/h]	8			11			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	799	797	680	740
Degree of Utilization, x	0.42	0.31	0.03	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.06	1.35	0.10	0.45
95th-Percentile Queue Length [ft]	51.44	33.79	2.39	11.13
Approach Delay [s/veh]	10.66	9.58	8.47	8.60
Approach LOS	B	A	A	A
Intersection Delay [s/veh]	9.92			
Intersection LOS	A			

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	53.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.030

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	52	95	170	43	101	47	221	530	34	28	400	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	95	170	43	101	47	221	530	34	28	400	62
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	28	51	14	32	15	61	145	9	8	114	18
Total Analysis Volume [veh/h]	62	114	204	55	129	60	242	581	37	32	457	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	30	50	50	4	24	24
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.33	0.55	0.55	0.04	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.66	0.13	0.55	0.04	0.13	0.31	0.03	0.02	0.24	0.06
s, saturation flow rate [veh/h]	268	1534	336	1505	1810	1900	1447	1509	1900	1096
c, Capacity [veh/h]	135	976	154	456	604	1049	798	65	496	286
d1, Uniform Delay [s]	30.45	6.86	29.05	22.78	23.06	13.01	9.27	42.10	32.33	26.26
k, delay calibration	0.50	0.04	0.50	0.04	0.50	0.50	0.50	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	178.79	0.04	135.56	0.05	1.98	2.11	0.11	2.14	11.37	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

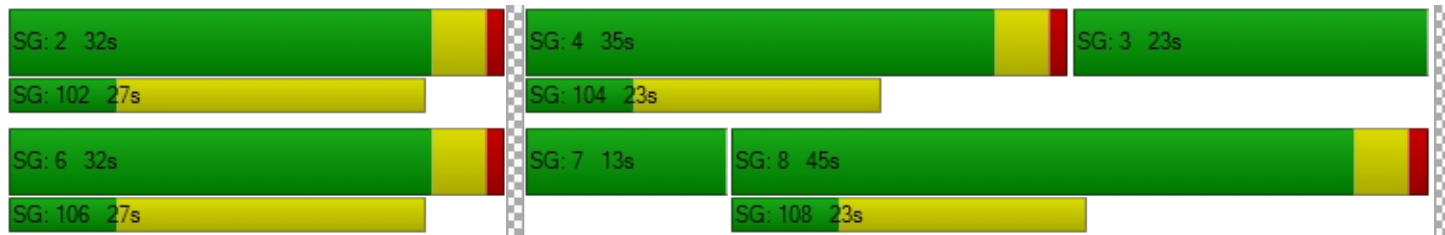
X, volume / capacity	1.30	0.21	1.20	0.13	0.40	0.55	0.05	0.49	0.92	0.25
d, Delay for Lane Group [s/veh]	209.24	6.90	164.61	22.83	25.04	15.12	9.38	44.24	43.70	26.42
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.74	1.52	8.17	0.90	4.18	7.59	0.34	0.73	10.95	1.20
50th-Percentile Queue Length [ft]	243.60	38.07	204.36	22.49	104.62	189.76	8.52	18.16	273.63	29.91
95th-Percentile Queue Length [veh]	16.87	2.74	14.08	1.62	7.53	12.11	0.61	1.31	16.37	2.15
95th-Percentile Queue Length [ft]	421.77	68.53	352.02	40.48	188.32	302.72	15.34	32.69	409.27	53.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	209.24	209.24	6.90	164.61	164.61	22.83	25.04	15.12	9.38	44.24	43.70	26.42
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	100.61			129.75			17.67			41.54		
Approach LOS	F			F			B			D		
d_I, Intersection Delay [s/veh]	53.01											
Intersection LOS	D											
Intersection V/C	1.030											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	15	662	168	138	634	46	199	348	318	32	218	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	662	168	138	634	46	199	348	318	32	218	32
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	180	46	36	167	12	53	93	85	9	63	9
Total Analysis Volume [veh/h]	16	721	183	145	667	48	213	372	340	37	254	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	44	44	44	37	37	37	24	24	24
g / C, Green / Cycle	0.36	0.36	0.36	0.48	0.48	0.48	0.41	0.41	0.41	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.13	0.15	0.18	0.03	0.16	0.20	0.22	0.04	0.08	0.08
s, saturation flow rate [veh/h]	759	3618	1460	974	3618	1444	1327	1900	1533	1008	1900	1784
c, Capacity [veh/h]	247	1293	522	474	1753	700	594	785	634	173	496	466
d1, Uniform Delay [s]	27.95	23.23	21.26	14.42	14.67	12.38	17.82	19.27	19.92	38.49	26.65	26.74
k, delay calibration	0.50	0.50	0.50	0.28	0.50	0.50	0.34	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	1.74	1.85	0.94	0.63	0.19	1.13	0.17	0.26	0.23	0.12	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

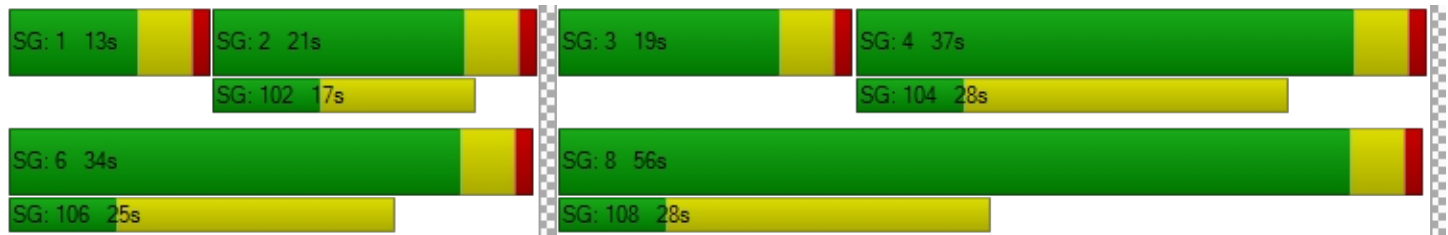
X, volume / capacity	0.06	0.56	0.35	0.31	0.38	0.07	0.36	0.47	0.54	0.21	0.30	0.31
d, Delay for Lane Group [s/veh]	28.45	24.97	23.11	15.35	15.30	12.57	18.96	19.44	20.18	38.72	26.77	26.88
Lane Group LOS	C	C	C	B	B	B	B	B	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.31	6.25	3.03	1.66	4.15	0.52	3.03	5.49	5.20	0.76	2.47	2.42
50th-Percentile Queue Length [ft]	7.65	156.16	75.64	41.61	103.78	13.06	75.85	137.28	129.96	19.07	61.75	60.45
95th-Percentile Queue Length [veh]	0.55	10.35	5.45	3.00	7.47	0.94	5.46	9.33	8.94	1.37	4.45	4.35
95th-Percentile Queue Length [ft]	13.76	258.63	136.16	74.90	186.80	23.50	136.54	233.36	223.44	34.33	111.16	108.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.45	24.97	23.11	15.35	15.30	12.57	18.96	19.44	20.18	38.72	26.82	26.88
Movement LOS	C	C	C	B	B	B	B	B	C	D	C	C
d_A, Approach Delay [s/veh]	24.66			15.16			19.60			28.17		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	20.80											
Intersection LOS	C											
Intersection V/C	0.471											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.422

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	28	216	158	40	166	36	94	791	64	34	475	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	216	158	40	166	36	94	791	64	34	475	56
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	61	45	11	47	10	25	207	17	10	143	17
Total Analysis Volume [veh/h]	32	245	179	46	189	41	98	827	67	41	572	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	24	57	48	48	57	46	46
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.63	0.53	0.53	0.63	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.17	0.12	0.04	0.13	0.10	0.24	0.24	0.05	0.17	0.18
s, saturation flow rate [veh/h]	1631	1475	1118	1820	962	1900	1820	780	1900	1794
c, Capacity [veh/h]	482	396	162	488	646	1004	962	519	964	910
d1, Uniform Delay [s]	28.63	27.43	40.32	27.59	7.03	13.13	13.20	7.33	13.17	13.24
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.30	0.35	0.26	0.04	1.46	1.57	0.30	0.95	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

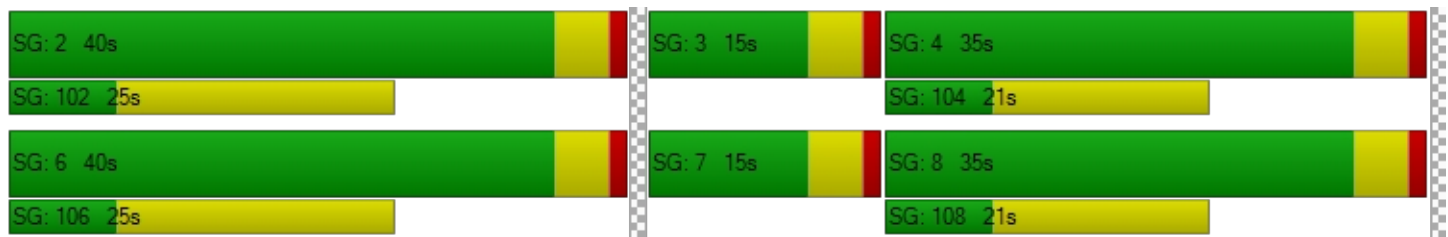
X, volume / capacity	0.57	0.45	0.28	0.47	0.15	0.45	0.46	0.08	0.34	0.35
d, Delay for Lane Group [s/veh]	29.03	27.74	40.67	27.86	7.07	14.59	14.77	7.63	14.12	14.28
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.99	3.13	0.98	4.04	0.67	5.69	5.59	0.31	3.94	3.85
50th-Percentile Queue Length [ft]	124.64	78.28	24.48	100.99	16.64	142.21	139.74	7.73	98.51	96.14
95th-Percentile Queue Length [veh]	8.65	5.64	1.76	7.27	1.20	9.60	9.47	0.56	7.09	6.92
95th-Percentile Queue Length [ft]	216.18	140.90	44.07	181.77	29.94	240.00	236.67	13.92	177.32	173.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.03	29.03	27.74	40.67	27.86	27.86	7.07	14.67	14.77	7.63	14.19	14.28
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	28.52			29.99			13.93			13.80		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.51											
Intersection LOS	B											
Intersection V/C	0.422											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	22	545	98	113	370	110	90	792	184	70	612	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	545	98	113	370	110	90	792	184	70	612	33
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	144	26	30	98	29	23	204	47	19	169	9
Total Analysis Volume [veh/h]	23	577	104	120	392	116	93	817	190	77	674	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	40	40	40	71	60	60	71	59	59
g / C, Green / Cycle	0.23	0.23	0.23	0.33	0.33	0.33	0.59	0.50	0.50	0.59	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.02	0.18	0.19	0.12	0.21	0.08	0.10	0.27	0.28	0.11	0.19	0.19
s, saturation flow rate [veh/h]	1008	1900	1744	1034	1900	1492	890	1900	1736	728	1900	1857
c, Capacity [veh/h]	106	443	407	298	636	499	524	944	862	406	940	919
d1, Uniform Delay [s]	55.97	43.21	43.57	30.73	33.48	28.81	11.68	20.93	21.13	13.32	18.87	18.89
k, delay calibration	0.04	0.08	0.09	0.31	0.04	0.04	0.08	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	2.24	3.56	2.48	0.37	0.09	0.12	2.31	2.68	1.04	1.17	1.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

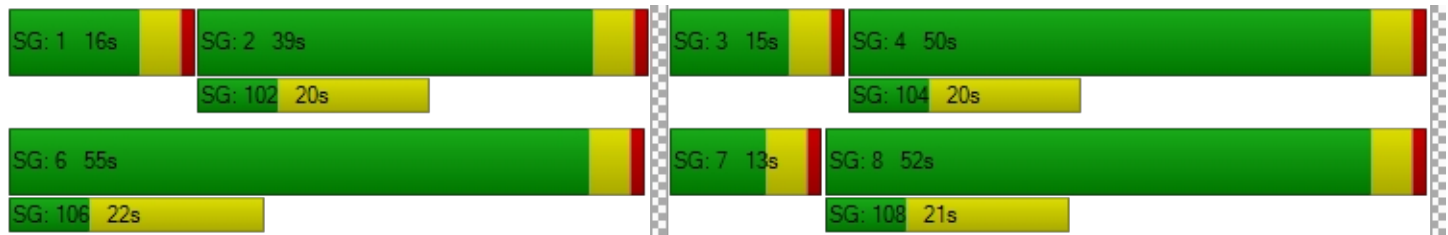
X, volume / capacity	0.22	0.79	0.82	0.40	0.62	0.23	0.18	0.55	0.56	0.19	0.38	0.38
d, Delay for Lane Group [s/veh]	56.35	45.45	47.12	33.21	33.85	28.90	11.79	23.24	23.81	14.36	20.04	20.10
Lane Group LOS	E	D	D	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.69	9.97	9.71	2.69	9.60	2.44	1.08	10.55	10.04	0.99	6.46	6.36
50th-Percentile Queue Length [ft]	17.32	249.36	242.63	67.19	240.04	61.02	26.92	263.65	250.99	24.65	161.47	159.11
95th-Percentile Queue Length [veh]	1.25	15.15	14.81	4.84	14.68	4.39	1.94	15.87	15.24	1.78	10.63	10.50
95th-Percentile Queue Length [ft]	31.17	378.85	370.36	120.93	367.08	109.84	48.45	396.79	380.89	44.38	265.67	262.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.35	46.11	47.12	33.21	33.85	28.90	11.79	23.45	23.81	14.36	20.07	20.10
Movement LOS	E	D	D	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	46.60			32.81			22.52			19.51		
Approach LOS	D			C			C			B		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.541											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	34.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	56	284	155	159	259	56	146	943	140	27	689	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	284	155	159	259	56	146	943	140	27	689	43
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	81	44	45	73	16	38	243	36	7	183	11
Total Analysis Volume [veh/h]	64	326	178	178	291	63	151	973	144	29	733	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	10	42	42	12	69	69	53	53	53
g / C, Green / Cycle	0.22	0.22	0.22	0.09	0.35	0.35	0.10	0.58	0.58	0.44	0.44	0.44
(v / s)_j Volume / Saturation Flow Rate	0.06	0.17	0.13	0.10	0.15	0.04	0.08	0.30	0.31	0.06	0.21	0.21
s, saturation flow rate [veh/h]	1038	1900	1364	1810	1900	1415	1810	1900	1749	512	1900	1840
c, Capacity [veh/h]	146	421	302	157	659	491	179	1096	1008	180	835	808
d1, Uniform Delay [s]	53.74	43.87	41.80	54.78	30.23	26.79	53.14	15.36	15.65	37.26	23.78	23.85
k, delay calibration	0.04	0.04	0.04	0.20	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.77	1.16	0.68	86.74	0.17	0.04	4.12	1.77	2.09	1.91	1.91	2.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.44	0.77	0.59	1.13	0.44	0.13	0.84	0.52	0.54	0.16	0.47	0.48
d, Delay for Lane Group [s/veh]	54.51	45.03	42.48	141.52	30.40	26.84	57.25	17.13	17.74	39.16	25.69	25.87
Lane Group LOS	D	D	D	F	C	C	E	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.90	9.13	4.73	8.48	6.45	1.24	4.68	9.67	9.51	0.79	8.28	8.15
50th-Percentile Queue Length [ft]	47.60	228.13	118.34	212.03	161.23	30.93	116.93	241.75	237.79	19.76	206.92	203.83
95th-Percentile Queue Length [veh]	3.43	14.08	8.30	13.86	10.61	2.23	8.22	14.77	14.57	1.42	12.99	12.84
95th-Percentile Queue Length [ft]	85.68	351.99	207.54	346.43	265.35	55.68	205.59	369.25	364.24	35.58	324.87	320.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	54.51	45.03	42.48	141.52	30.40	26.84	57.25	17.38	17.74	39.16	25.77	25.87
Movement LOS	D	D	D	F	C	C	E	B	B	D	C	C
d_A, Approach Delay [s/veh]	45.30			67.16			22.17			26.26		
Approach LOS	D			E			C			C		
d_I, Intersection Delay [s/veh]	34.88											
Intersection LOS	C											
Intersection V/C	0.583											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└			┌└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	85	151	156	125	62	69	1185	55	13	995	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	85	151	156	125	62	69	1185	55	13	995	7
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	24	42	44	39	20	18	314	15	4	276	2
Total Analysis Volume [veh/h]	23	95	169	175	158	78	73	1257	58	14	1106	8
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	6	78	78	3	74	74
g / C, Green / Cycle	0.21	0.21	0.05	0.65	0.65	0.02	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.16	0.20	0.04	0.35	0.35	0.01	0.46	0.29
s, saturation flow rate [veh/h]	1662	1200	1810	1900	1861	1810	1200	1893
c, Capacity [veh/h]	349	252	97	1239	1214	41	745	1176
d1, Uniform Delay [s]	44.41	46.51	55.87	11.11	11.16	57.67	16.07	12.18
k, delay calibration	0.04	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	18.95	4.31	1.65	1.71	1.87	6.78	1.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

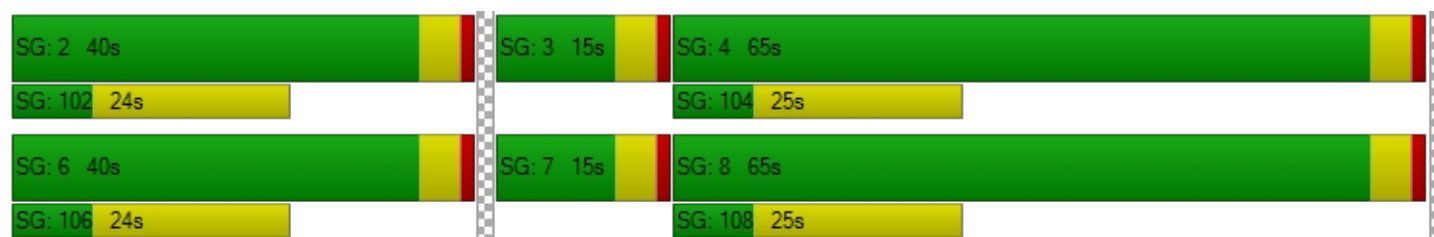
X, volume / capacity	0.76	0.94	0.75	0.53	0.54	0.35	0.75	0.47
d, Delay for Lane Group [s/veh]	45.70	65.46	60.18	12.76	12.87	59.54	22.85	13.55
Lane Group LOS	D	E	E	B	B	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	7.47	8.20	2.29	9.40	9.33	0.44	11.55	8.12
50th-Percentile Queue Length [ft]	186.72	205.05	57.37	234.95	233.36	11.00	288.86	203.04
95th-Percentile Queue Length [veh]	11.95	12.90	4.13	14.43	14.34	0.79	17.13	12.80
95th-Percentile Queue Length [ft]	298.77	322.47	103.26	360.64	358.62	19.79	428.23	319.88

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	45.70	45.70	0.00	65.46	65.46	60.18	12.81	12.87	59.54	18.24	13.55
Movement LOS		D	D		E	E	E	B	B	E	B	B
d_A, Approach Delay [s/veh]	45.70			65.46			15.31			18.72		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]	23.17											
Intersection LOS	C											
Intersection V/C	0.702											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	67.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.915

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	548	276	737	254	624	0	0	1232	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	548	276	737	254	624	0	0	1232	46
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	145	73	195	67	164	0	0	320	12
Total Analysis Volume [veh/h]	0	0	0	581	293	782	267	657	0	0	1280	48
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	19	76	52	52
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.16	0.63	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.24	0.24	0.28	0.25	0.15	0.18	0.49	0.49
s, saturation flow rate [veh/h]	1810	1869	1418	1558	1810	3618	1800	900
c, Capacity [veh/h]	523	540	410	450	292	2294	782	391
d1, Uniform Delay [s]	39.79	39.59	41.78	40.40	49.41	9.80	33.87	33.87
k, delay calibration	0.27	0.26	0.38	0.31	0.23	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.23	7.15	28.84	13.22	20.02	0.31	75.22	86.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.83	0.82	0.95	0.87	0.91	0.29	1.13	1.13
d, Delay for Lane Group [s/veh]	48.02	46.75	70.62	53.62	69.42	10.11	109.09	120.56
Lane Group LOS	D	D	E	D	E	B	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	12.64	12.66	14.13	12.14	9.46	3.84	19.21	20.46
50th-Percentile Queue Length [ft]	316.1	316.4	353.2	303.5	236.54	96.00	480.27	511.41
95th-Percentile Queue Length [veh]	18.48	18.49	20.29	17.86	14.51	6.91	28.69	30.32
95th-Percentile Queue Length [ft]	461.9	462.2	507.3	446.3	362.66	172.80	717.30	757.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	47.65	46.75	61.62	69.42	10.11	0.00	0.00	112.63	120.56
Movement LOS				D	D	E	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			54.34			27.25			112.91		
Approach LOS	A			D			C			F		
d_I, Intersection Delay [s/veh]	67.84											
Intersection LOS	E											
Intersection V/C	0.915											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	67.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.916

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	104	164	246	0	0	0	0	796	265	547	1220	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	164	246	0	0	0	0	796	265	547	1220	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	49	74	0	0	0	0	212	70	146	325	0
Total Analysis Volume [veh/h]	125	197	295	0	0	0	0	846	282	583	1301	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24		69	69	69	13	87
g / C, Green / Cycle	0.20	0.20	0.20		0.57	0.57	0.57	0.11	0.72
(v / s)_j Volume / Saturation Flow Rate	0.09	0.09	0.19		0.16	0.17	0.56	0.17	0.36
s, saturation flow rate [veh/h]	1831	1729	1581		3618	1630	500	3514	3618
c, Capacity [veh/h]	369	348	318		2073	934	287	389	2612
d1, Uniform Delay [s]	42.09	42.07	47.05		12.96	13.22	25.08	53.36	7.24
k, delay calibration	0.04	0.04	0.21		0.04	0.04	0.43	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	0.34	19.16		0.03	0.07	45.65	237.79	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.45	0.45	0.93		0.27	0.30	0.98	1.50	0.50
d, Delay for Lane Group [s/veh]	42.41	42.41	66.22		12.98	13.29	70.74	291.15	7.92
Lane Group LOS	D	D	E		B	B	E	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.33	4.06	10.22		3.72	3.81	10.83	18.69	6.73
50th-Percentile Queue Length [ft]	108.13	101.61	255.54		93.08	95.24	270.67	467.33	168.22
95th-Percentile Queue Length [veh]	7.74	7.32	15.46		6.70	6.86	16.22	29.64	10.98
95th-Percentile Queue Length [ft]	193.41	182.89	386.62		167.54	171.44	405.58	741.04	274.58

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.41	42.41	66.22	0.00	0.00	0.00	0.00	13.02	70.74	291.15	7.92	0.00
Movement LOS	D	D	E					B	E	F	A	
d_A, Approach Delay [s/veh]	53.79			0.00			27.50			95.56		
Approach LOS	D			A			C			F		
d_I, Intersection Delay [s/veh]	67.31											
Intersection LOS	E											
Intersection V/C	0.916											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	54.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	115	373	157	236	535	53	162	953	100	68	1018	146
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	373	157	236	535	53	162	953	100	68	1018	146
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	99	42	68	153	15	47	278	29	18	274	39
Total Analysis Volume [veh/h]	123	398	167	270	613	61	189	1114	117	73	1094	157
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	28	28	13	31	31	10	54	54	6	50	50
g / C, Green / Cycle	0.08	0.23	0.23	0.11	0.26	0.26	0.09	0.45	0.45	0.05	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.07	0.21	0.11	0.15	0.18	0.18	0.10	0.31	0.07	0.04	0.30	0.10
s, saturation flow rate [veh/h]	1810	1900	1576	1810	1900	1822	1810	3618	1562	1810	3618	1576
c, Capacity [veh/h]	150	438	364	203	495	475	157	1640	708	94	1514	660
d1, Uniform Delay [s]	54.20	44.94	39.74	53.28	40.05	40.14	54.81	25.91	19.38	56.22	29.09	22.54
k, delay calibration	0.04	0.20	0.11	0.50	0.11	0.11	0.24	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.24	12.30	0.91	177.50	1.74	1.88	116.66	2.29	0.50	5.07	3.02	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.91	0.46	1.33	0.69	0.70	1.20	0.68	0.17	0.78	0.72	0.24
d, Delay for Lane Group [s/veh]	58.44	57.24	40.64	230.78	41.80	42.01	171.47	28.20	19.88	61.29	32.11	23.39
Lane Group LOS	E	E	D	F	D	D	F	C	B	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.80	12.85	4.30	16.09	9.24	8.98	9.79	12.68	2.01	2.30	13.39	2.99
50th-Percentile Queue Length [ft]	95.07	321.17	107.56	402.19	230.95	224.54	244.74	316.97	50.23	57.51	334.84	74.83
95th-Percentile Queue Length [veh]	6.84	18.72	7.70	25.21	14.22	13.90	15.91	18.52	3.62	4.14	19.40	5.39
95th-Percentile Queue Length [ft]	171.12	468.12	192.60	630.22	355.56	347.42	397.70	462.96	90.42	103.53	484.89	134.69

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.44	57.24	40.64	230.78	41.89	42.01	171.47	28.20	19.88	61.29	32.11	23.39
Movement LOS	E	E	D	F	D	D	F	C	B	E	C	C
d_A, Approach Delay [s/veh]	53.43			95.93			46.58			32.68		
Approach LOS	D			F			D			C		
d_I, Intersection Delay [s/veh]	54.10											
Intersection LOS	D											
Intersection V/C	0.766											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	33	706	58	102	518	88	50	468	77	101	380	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	706	58	102	518	88	50	468	77	101	380	28
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	190	16	28	140	24	13	126	21	31	115	8
Total Analysis Volume [veh/h]	35	758	62	110	559	95	54	503	83	122	460	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	32	32	32	32	32
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.40	0.40	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.04	0.22	0.22	0.16	0.18	0.18	0.06	0.26	0.05	0.13	0.26
s, saturation flow rate [veh/h]	790	1900	1835	675	1900	1791	916	1900	1574	909	1874
c, Capacity [veh/h]	364	924	893	301	924	871	238	757	627	236	747
d1, Uniform Delay [s]	17.83	13.50	13.53	22.54	12.80	12.83	29.88	19.68	15.28	32.57	19.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.04	0.09
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	1.58	1.66	3.39	1.10	1.19	0.18	0.87	0.04	0.66	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.45	0.45	0.36	0.36	0.37	0.23	0.66	0.13	0.52	0.66
d, Delay for Lane Group [s/veh]	18.35	15.08	15.19	25.94	13.91	14.02	30.06	20.55	15.31	33.23	20.50
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.48	4.94	4.84	1.91	3.75	3.60	0.90	7.20	0.90	2.23	7.05
50th-Percentile Queue Length [ft]	11.97	123.48	120.95	47.78	93.79	89.94	22.56	179.95	22.62	55.84	176.37
95th-Percentile Queue Length [veh]	0.86	8.58	8.45	3.44	6.75	6.48	1.62	11.60	1.63	4.02	11.41
95th-Percentile Queue Length [ft]	21.54	214.60	211.13	86.00	168.82	161.88	40.60	289.95	40.71	100.52	285.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.35	15.13	15.19	25.94	13.95	14.02	30.06	20.55	15.31	33.23	20.50	20.50
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	15.26			15.69			20.67			23.02		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.24											
Intersection LOS	B											
Intersection V/C	0.485											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	129	580	27	80	609	57	21	284	35	54	473	163
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	580	27	80	609	57	21	284	35	54	473	163
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	161	7	21	163	15	6	83	10	15	128	44
Total Analysis Volume [veh/h]	143	643	30	86	653	61	24	331	41	58	510	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	30	30	30	30	30
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.19	0.18	0.18	0.11	0.19	0.19	0.03	0.20	0.06	0.27	0.11
s, saturation flow rate [veh/h]	747	1900	1864	777	1900	1834	904	1854	1026	1900	1578
c, Capacity [veh/h]	416	1074	1054	435	1074	1036	128	616	215	632	525
d1, Uniform Delay [s]	16.87	10.35	10.36	14.89	10.51	10.52	41.41	25.06	35.92	27.38	22.55
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.10	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	0.77	0.79	1.01	0.85	0.89	0.26	0.36	0.25	2.25	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.32	0.32	0.20	0.34	0.34	0.19	0.60	0.27	0.81	0.34
d, Delay for Lane Group [s/veh]	19.12	11.12	11.15	15.91	11.36	11.41	41.67	25.42	36.17	29.63	22.69
Lane Group LOS	B	B	B	B	B	B	D	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.14	3.42	3.38	1.13	3.72	3.62	0.52	6.39	1.16	9.87	2.71
50th-Percentile Queue Length [ft]	53.51	85.59	84.47	28.28	92.91	90.60	12.91	159.64	28.96	246.71	67.81
95th-Percentile Queue Length [veh]	3.85	6.16	6.08	2.04	6.69	6.52	0.93	10.53	2.09	15.02	4.88
95th-Percentile Queue Length [ft]	96.32	154.06	152.04	50.91	167.23	163.08	23.23	263.25	52.13	375.50	122.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.12	11.14	11.15	15.91	11.38	11.41	41.67	25.42	25.42	36.17	29.63	22.69
Movement LOS	B	B	B	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.54			11.87			26.40			28.50		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.65											
Intersection LOS	B											
Intersection V/C	0.460											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	33	519	49	47	505	35	66	117	70	30	128	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	519	49	47	505	35	66	117	70	30	128	47
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	145	14	12	132	9	17	31	18	8	34	13
Total Analysis Volume [veh/h]	37	580	55	49	527	36	69	122	73	32	137	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.04	0.34	0.06	0.30	0.17	0.10	0.03
s, saturation flow rate [veh/h]	861	1843	805	1854	1599	1765	1504
c, Capacity [veh/h]	238	779	188	784	754	820	638
d1, Uniform Delay [s]	23.44	15.31	26.86	14.41	11.76	10.96	10.33
k, delay calibration	0.04	0.17	0.04	0.10	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	3.25	0.27	1.12	1.28	0.57	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

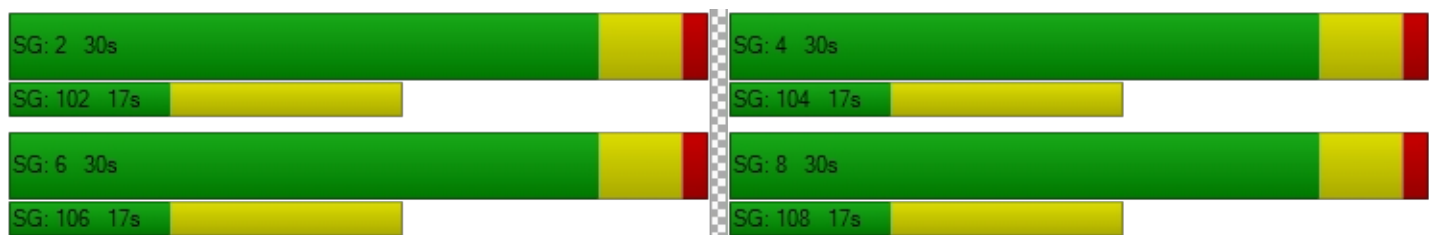
X, volume / capacity	0.16	0.81	0.26	0.72	0.35	0.21	0.08
d, Delay for Lane Group [s/veh]	23.55	18.56	27.13	15.53	13.04	11.53	10.57
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.45	7.25	0.66	5.70	2.36	1.38	0.39
50th-Percentile Queue Length [ft]	11.34	181.17	16.54	142.60	59.08	34.50	9.78
95th-Percentile Queue Length [veh]	0.82	11.66	1.19	9.62	4.25	2.48	0.70
95th-Percentile Queue Length [ft]	20.40	291.54	29.78	240.52	106.34	62.11	17.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.55	18.56	18.56	27.13	15.53	15.53	13.04	13.04	13.04	11.53	11.53	10.57
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.84			16.46			13.04			11.31		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.510											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	22	827	58	63	878	79	75	357	89	69	251	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	827	58	63	878	79	75	357	89	69	251	43
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	235	16	17	235	21	20	96	24	21	76	13
Total Analysis Volume [veh/h]	25	941	66	67	940	85	81	384	96	84	304	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.05	0.27	0.27	0.12	0.27	0.28	0.08	0.20	0.06	0.08	0.16	0.04
s, saturation flow rate [veh/h]	554	1900	1839	567	1900	1799	1049	1900	1545	1003	1900	1460
c, Capacity [veh/h]	287	1051	1017	296	1051	995	276	631	513	226	631	485
d1, Uniform Delay [s]	17.38	10.91	10.95	18.32	11.00	11.11	29.32	22.36	19.03	32.62	21.24	18.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	1.60	1.68	1.76	1.67	1.85	0.22	0.36	0.06	0.38	0.21	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

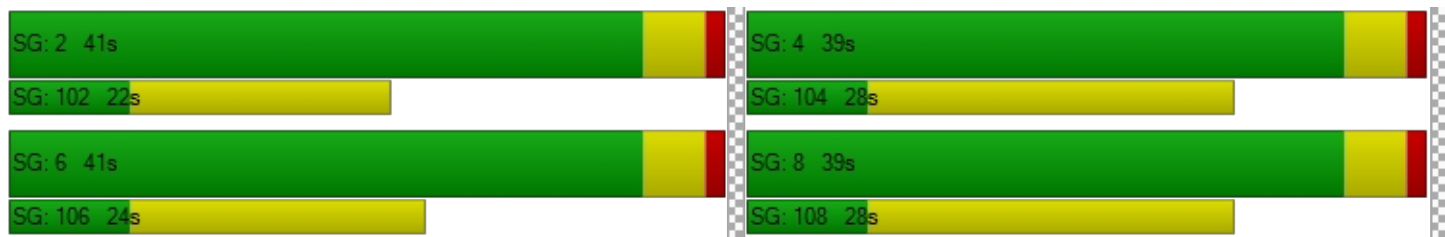
X, volume / capacity	0.09	0.48	0.49	0.23	0.49	0.51	0.29	0.61	0.19	0.37	0.48	0.11
d, Delay for Lane Group [s/veh]	17.97	12.51	12.63	20.08	12.66	12.96	29.54	22.72	19.09	33.00	21.45	18.54
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.34	5.23	5.14	0.98	5.38	5.32	1.37	5.81	1.23	1.54	4.44	0.66
50th-Percentile Queue Length [ft]	8.53	130.66	128.56	24.58	134.54	132.89	34.15	145.18	30.78	38.48	110.98	16.52
95th-Percentile Queue Length [veh]	0.61	8.98	8.86	1.77	9.19	9.10	2.46	9.76	2.22	2.77	7.89	1.19
95th-Percentile Queue Length [ft]	15.36	224.39	221.53	44.25	229.65	227.41	61.47	243.99	55.40	69.26	197.37	29.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.97	12.57	12.63	20.08	12.79	12.96	29.54	22.72	19.09	33.00	21.45	18.54
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.70			13.25			23.08			23.31		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.25											
Intersection LOS	B											
Intersection V/C	0.483											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	22	166	102	59	168	43	48	456	36	14	347	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	166	102	59	168	43	48	456	36	14	347	18
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	46	28	19	54	14	13	121	10	4	92	5
Total Analysis Volume [veh/h]	24	183	113	75	214	55	51	483	38	15	370	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.29	0.31	0.03	0.05	0.25	0.02	0.02	0.19	0.01
s, saturation flow rate [veh/h]	1118	947	1579	1022	1900	1537	924	1900	1540
c, Capacity [veh/h]	430	380	538	513	1034	836	432	1034	838
d1, Uniform Delay [s]	21.97	21.99	18.00	14.44	11.15	8.53	16.14	10.33	8.42
k, delay calibration	0.31	0.35	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.24	9.80	0.08	0.39	1.52	0.10	0.15	0.97	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

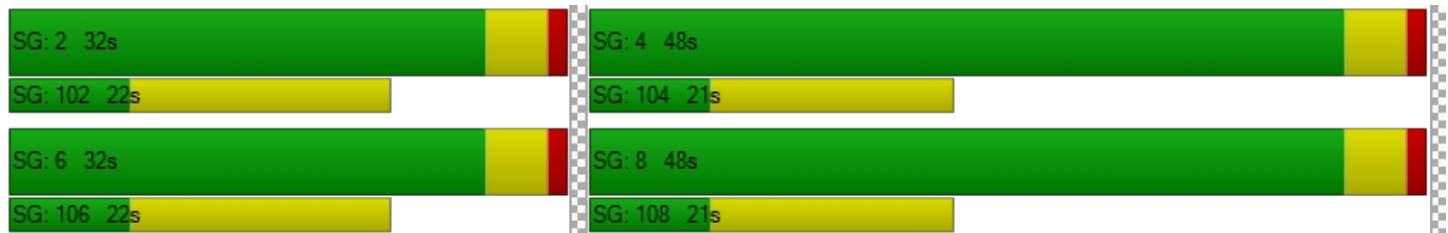
X, volume / capacity	0.74	0.76	0.10	0.10	0.47	0.05	0.03	0.36	0.02
d, Delay for Lane Group [s/veh]	29.21	31.79	18.08	14.82	12.67	8.63	16.29	11.29	8.47
Lane Group LOS	C	C	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	5.37	5.39	0.67	0.60	5.14	0.31	0.19	3.61	0.15
50th-Percentile Queue Length [ft]	134.27	134.76	16.73	14.98	128.41	7.66	4.69	90.32	3.78
95th-Percentile Queue Length [veh]	9.17	9.20	1.20	1.08	8.85	0.55	0.34	6.50	0.27
95th-Percentile Queue Length [ft]	229.29	229.96	30.11	26.97	221.33	13.80	8.44	162.57	6.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.21	29.21	29.21	31.79	31.79	18.08	14.82	12.67	8.63	16.29	11.29	8.47
Movement LOS	C	C	C	C	C	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	29.21			29.60			12.59			11.35		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.10											
Intersection LOS	B											
Intersection V/C	0.559											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	55	800	44	95	672	80	55	395	57	49	425	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	800	44	95	672	80	55	395	57	49	425	27
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	215	12	25	176	21	15	104	15	13	111	7
Total Analysis Volume [veh/h]	59	861	47	100	705	84	58	418	60	51	445	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.08	0.24	0.24	0.16	0.21	0.21	0.06	0.22	0.04	0.05	0.23	0.02
s, saturation flow rate [veh/h]	695	1900	1859	623	1900	1815	952	1900	1551	976	1900	1546
c, Capacity [veh/h]	382	1063	1040	339	1063	1016	174	618	505	192	618	503
d1, Uniform Delay [s]	14.69	10.21	10.23	17.19	9.83	9.85	35.38	23.34	18.94	33.82	23.78	18.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.11	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	1.27	1.31	2.21	1.02	1.09	0.41	0.93	0.04	0.27	1.61	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.43	0.43	0.30	0.38	0.38	0.33	0.68	0.12	0.27	0.72	0.06
d, Delay for Lane Group [s/veh]	15.55	11.49	11.54	19.40	10.86	10.94	35.79	24.27	18.98	34.09	25.38	18.56
Lane Group LOS	B	B	B	B	B	B	D	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.74	4.54	4.47	1.45	3.81	3.70	1.09	6.65	0.76	0.93	7.32	0.35
50th-Percentile Queue Length [ft]	18.38	113.43	111.72	36.34	95.37	92.45	27.33	166.29	19.04	23.25	182.90	8.70
95th-Percentile Queue Length [veh]	1.32	8.03	7.94	2.62	6.87	6.66	1.97	10.88	1.37	1.67	11.75	0.63
95th-Percentile Queue Length [ft]	33.09	200.76	198.40	65.42	171.67	166.41	49.19	272.03	34.27	41.85	293.80	15.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.55	11.51	11.54	19.40	10.89	10.94	35.79	24.27	18.98	34.09	25.38	18.56
Movement LOS	B	B	B	B	B	B	D	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.76			11.85			24.92			25.87		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.74											
Intersection LOS	B											
Intersection V/C	0.476											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	27	388	114	88	402	88	51	354	61	46	465	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	388	114	88	402	88	51	354	61	46	465	40
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	100	30	24	110	24	14	97	17	13	129	11
Total Analysis Volume [veh/h]	28	402	118	96	440	96	56	389	67	51	516	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.03	0.21	0.08	0.10	0.23	0.06	0.06	0.20	0.04	0.05	0.27	0.03
s, saturation flow rate [veh/h]	959	1900	1562	996	1900	1537	896	1900	1528	1000	1900	1559
c, Capacity [veh/h]	418	947	779	446	947	766	189	703	565	273	703	577
d1, Uniform Delay [s]	16.26	11.16	9.52	16.64	11.45	9.39	30.50	17.47	14.53	25.39	19.07	14.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.11	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	1.39	0.41	1.10	1.64	0.34	0.32	0.25	0.03	0.12	1.54	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

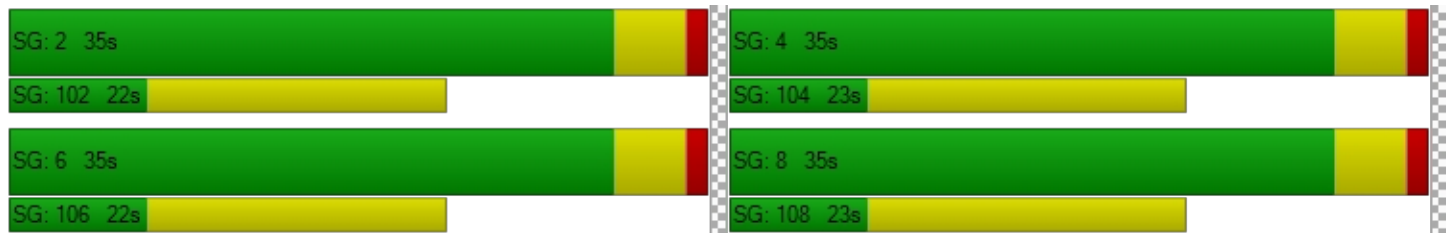
X, volume / capacity	0.07	0.42	0.15	0.22	0.46	0.13	0.30	0.55	0.12	0.19	0.73	0.08
d, Delay for Lane Group [s/veh]	16.57	12.56	9.93	17.75	13.09	9.72	30.82	17.72	14.56	25.51	20.60	14.31
Lane Group LOS	B	B	A	B	B	A	C	B	B	C	C	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	3.74	0.93	1.16	4.22	0.75	0.90	4.64	0.66	0.72	6.95	0.43
50th-Percentile Queue Length [ft]	8.06	93.53	23.35	28.95	105.51	18.73	22.39	116.02	16.58	18.06	173.72	10.71
95th-Percentile Queue Length [veh]	0.58	6.73	1.68	2.08	7.59	1.35	1.61	8.17	1.19	1.30	11.27	0.77
95th-Percentile Queue Length [ft]	14.50	168.36	42.03	52.11	189.74	33.72	40.30	204.35	29.84	32.51	281.80	19.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.57	12.56	9.93	17.75	13.09	9.72	30.82	17.72	14.56	25.51	20.60	14.31
Movement LOS	B	B	A	B	B	A	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	12.20			13.29			18.74			20.56		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.17											
Intersection LOS	B											
Intersection V/C	0.503											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	43	177	47	199	567	129	14	339	63	72	584	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	177	47	199	567	129	14	339	63	72	584	54
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	47	12	52	150	34	4	102	19	20	159	15
Total Analysis Volume [veh/h]	46	188	50	210	598	136	17	407	76	78	635	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.07	0.18	0.20	0.20	0.02	0.21	0.05	0.08	0.33	0.04
s, saturation flow rate [veh/h]	734	1900	1746	1155	1900	1756	802	1900	1516	978	1900	1554
c, Capacity [veh/h]	297	903	830	530	903	834	202	736	588	345	736	602
d1, Uniform Delay [s]	20.17	10.28	10.32	16.97	12.03	12.07	27.47	16.69	13.80	21.54	19.69	13.63
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.15	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.31	0.36	2.21	1.43	1.59	0.07	0.24	0.04	0.12	4.19	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

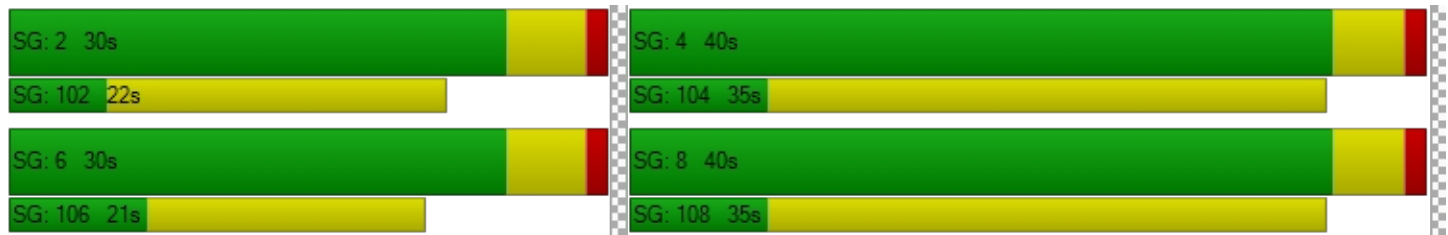
X, volume / capacity	0.15	0.13	0.14	0.40	0.42	0.43	0.08	0.55	0.13	0.23	0.86	0.10
d, Delay for Lane Group [s/veh]	21.28	10.59	10.67	19.19	13.46	13.65	27.54	16.93	13.84	21.66	23.88	13.66
Lane Group LOS	C	B	B	B	B	B	C	B	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.72	1.20	1.16	2.55	3.49	3.31	0.25	4.73	0.73	1.01	9.47	0.56
50th-Percentile Queue Length [ft]	17.90	29.90	29.09	63.75	87.32	82.82	6.24	118.17	18.21	25.21	236.72	13.95
95th-Percentile Queue Length [veh]	1.29	2.15	2.09	4.59	6.29	5.96	0.45	8.29	1.31	1.82	14.52	1.00
95th-Percentile Queue Length [ft]	32.23	53.83	52.36	114.76	157.17	149.08	11.24	207.31	32.78	45.38	362.88	25.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.28	10.62	10.67	19.19	13.53	13.65	27.54	16.93	13.84	21.66	23.88	13.66
Movement LOS	C	B	B	B	B	B	C	B	B	C	C	B
d_A, Approach Delay [s/veh]	12.36			14.81			16.82			22.87		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.42											
Intersection LOS	B											
Intersection V/C	0.536											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.500

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	27	494	64	60	533	31	86	74	65	24	66	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	494	64	60	533	31	86	74	65	24	66	34
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	129	17	16	143	8	28	24	21	7	19	10
Total Analysis Volume [veh/h]	28	517	67	64	571	33	110	95	83	28	77	39
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	16	16	8	8
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.03	0.32	0.08	0.30	0.02	0.18	0.08
s, saturation flow rate [veh/h]	835	1841	829	1900	1495	1577	1705
c, Capacity [veh/h]	371	869	354	897	706	548	561
d1, Uniform Delay [s]	11.45	6.85	12.56	6.69	4.78	11.23	10.20
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.03	0.34	0.09	0.28	0.01	0.29	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

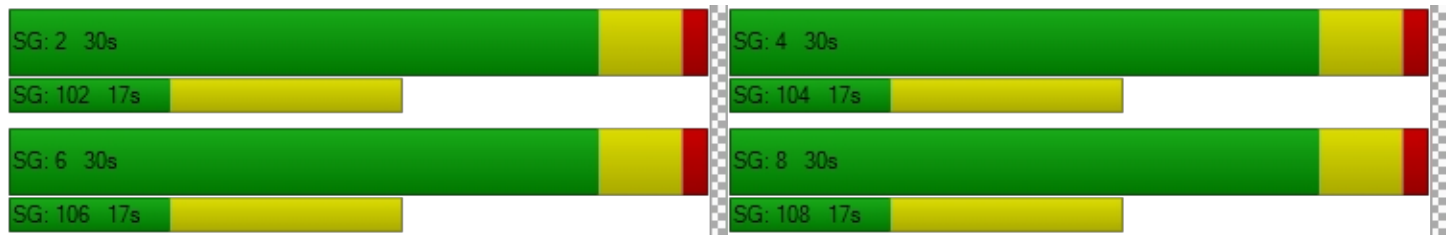
X, volume / capacity	0.08	0.67	0.18	0.64	0.05	0.53	0.26
d, Delay for Lane Group [s/veh]	11.49	7.19	12.65	6.97	4.79	11.53	10.29
Lane Group LOS	B	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.14	1.81	0.34	1.71	0.07	1.37	0.62
50th-Percentile Queue Length [ft]	3.46	45.13	8.62	42.87	1.75	34.21	15.39
95th-Percentile Queue Length [veh]	0.25	3.25	0.62	3.09	0.13	2.46	1.11
95th-Percentile Queue Length [ft]	6.23	81.24	15.51	77.17	3.15	61.57	27.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.49	7.19	7.19	12.65	6.97	4.79	11.53	11.53	11.53	10.29	10.29	10.29
Movement LOS	B	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.39			7.40			11.53			10.29		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	8.33											
Intersection LOS	A											
Intersection V/C	0.500											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	38	949	52	73	905	50	122	282	62	44	184	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	949	52	73	905	50	122	282	62	44	184	17
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	256	14	20	245	14	32	73	16	11	48	4
Total Analysis Volume [veh/h]	41	1023	56	79	979	54	127	293	64	46	192	18
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.07	0.29	0.29	0.15	0.27	0.28	0.11	0.20	0.04	0.11
s, saturation flow rate [veh/h]	553	1900	1857	530	1900	1849	1179	1828	1033	1866
c, Capacity [veh/h]	325	1133	1108	311	1133	1103	287	527	176	538
d1, Uniform Delay [s]	14.27	9.12	9.14	15.98	8.97	9.00	31.10	25.16	35.15	22.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	1.46	1.51	1.96	1.34	1.41	0.40	0.57	0.29	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

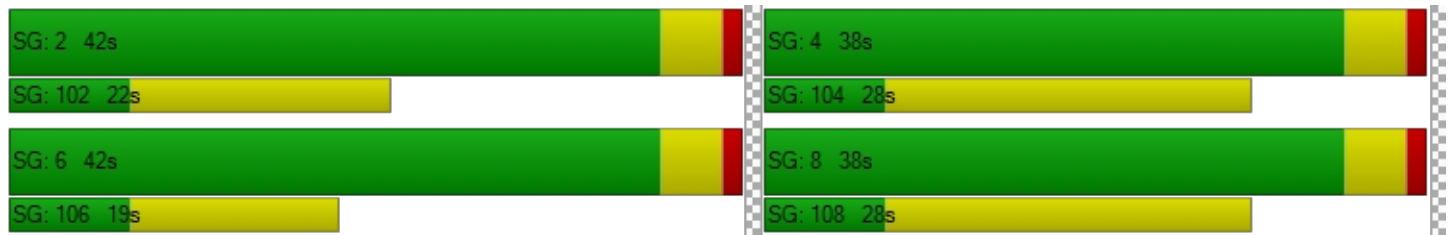
X, volume / capacity	0.13	0.48	0.48	0.25	0.46	0.46	0.44	0.68	0.26	0.39
d, Delay for Lane Group [s/veh]	15.06	10.58	10.65	17.94	10.32	10.41	31.50	25.73	35.44	22.99
Lane Group LOS	B	B	B	B	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.50	4.91	4.85	1.12	4.94	4.88	2.23	5.73	0.85	3.03
50th-Percentile Queue Length [ft]	12.47	122.80	121.16	28.09	123.50	122.06	55.65	143.13	21.14	75.87
95th-Percentile Queue Length [veh]	0.90	8.55	8.46	2.02	8.59	8.51	4.01	9.65	1.52	5.46
95th-Percentile Queue Length [ft]	22.45	213.67	211.42	50.57	214.63	212.65	100.17	241.24	38.05	136.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.06	10.61	10.65	17.94	10.36	10.41	31.50	25.73	25.73	35.44	22.99	22.99
Movement LOS	B	B	B	B	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	10.78			10.90			27.25			25.22		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.75											
Intersection LOS	B											
Intersection V/C	0.483											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	17	222	136	41	168	44	48	423	31	17	290	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	222	136	41	168	44	48	423	31	17	290	13
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	70	43	13	52	14	13	114	8	5	83	4
Total Analysis Volume [veh/h]	21	279	171	51	207	54	52	455	33	20	334	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	46	46	46	46
g / C, Green / Cycle	0.31	0.31	0.31	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.28	0.22	0.03	0.35	0.02	0.20	0.01
s, saturation flow rate [veh/h]	1664	1198	1553	1437	1537	1748	1557
c, Capacity [veh/h]	555	419	473	883	891	1061	903
d1, Uniform Delay [s]	26.75	22.38	19.96	10.44	7.20	8.71	7.11
k, delay calibration	0.31	0.16	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.79	2.23	0.11	2.71	0.08	0.85	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

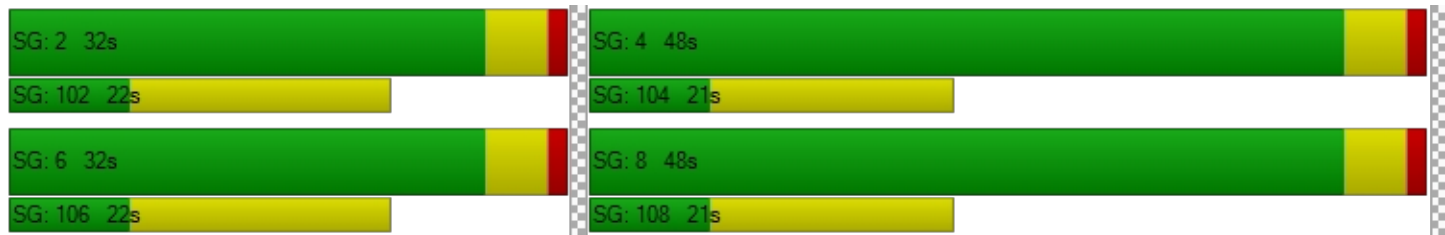
X, volume / capacity	0.85	0.62	0.11	0.57	0.04	0.33	0.02
d, Delay for Lane Group [s/veh]	36.53	24.61	20.06	13.16	7.28	9.56	7.15
Lane Group LOS	D	C	C	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.63	3.93	0.70	4.97	0.23	2.96	0.10
50th-Percentile Queue Length [ft]	240.73	98.30	17.55	124.20	5.73	73.92	2.57
95th-Percentile Queue Length [veh]	14.72	7.08	1.26	8.62	0.41	5.32	0.18
95th-Percentile Queue Length [ft]	367.96	176.94	31.59	215.59	10.31	133.05	4.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.53	36.53	36.53	24.61	24.61	20.06	13.16	13.16	7.28	9.56	9.56	7.15
Movement LOS	D	D	D	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	36.53			23.83			12.80			9.46		
Approach LOS	D			C			B			A		
d_I, Intersection Delay [s/veh]	20.71											
Intersection LOS	C											
Intersection V/C	0.636											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.513

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	832	60	69	858	87	45	351	57	69	358	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	832	60	69	858	87	45	351	57	69	358	27
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	216	16	18	228	23	12	97	16	19	97	7
Total Analysis Volume [veh/h]	42	864	62	73	910	92	50	387	63	75	388	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.07	0.25	0.25	0.12	0.27	0.27	0.05	0.24	0.08	0.22
s, saturation flow rate [veh/h]	571	1900	1844	612	1900	1829	977	1846	953	1870
c, Capacity [veh/h]	291	1023	993	316	1023	985	213	639	188	648
d1, Uniform Delay [s]	18.15	11.29	11.32	18.07	11.62	11.65	32.19	22.59	34.95	21.99
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.13	0.04	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	1.48	1.54	1.70	1.73	1.82	0.21	1.72	0.51	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.46	0.46	0.23	0.50	0.50	0.23	0.70	0.40	0.64
d, Delay for Lane Group [s/veh]	19.20	12.77	12.86	19.78	13.35	13.47	32.39	24.31	35.46	22.82
Lane Group LOS	B	B	B	B	B	B	C	C	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.61	5.01	4.91	1.07	5.62	5.47	0.87	7.09	1.40	6.27
50th-Percentile Queue Length [ft]	15.18	125.13	122.81	26.83	140.48	136.87	21.77	177.27	34.89	156.70
95th-Percentile Queue Length [veh]	1.09	8.67	8.55	1.93	9.51	9.31	1.57	11.46	2.51	10.37
95th-Percentile Queue Length [ft]	27.32	216.86	213.68	48.29	237.67	232.80	39.19	286.45	62.80	259.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.20	12.81	12.86	19.78	13.40	13.47	32.39	24.31	24.31	35.46	22.82	22.82
Movement LOS	B	B	B	B	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	13.09			13.84			25.12			24.74		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.23											
Intersection LOS	B											
Intersection V/C	0.513											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	43	425	73	36	406	76	90	335	42	48	373	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	425	73	36	406	76	90	335	42	48	373	47
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	108	18	10	110	21	26	97	12	13	103	13
Total Analysis Volume [veh/h]	44	430	74	39	439	82	104	387	49	53	411	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.05	0.23	0.05	0.04	0.23	0.05	0.11	0.24	0.06	0.25
s, saturation flow rate [veh/h]	961	1900	1550	966	1900	1567	933	1847	962	1835
c, Capacity [veh/h]	399	912	744	404	912	752	234	717	255	713
d1, Uniform Delay [s]	17.56	12.23	9.94	17.26	12.30	9.98	29.13	17.13	26.27	17.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.07
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	1.75	0.27	0.47	1.82	0.29	0.50	0.32	0.15	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

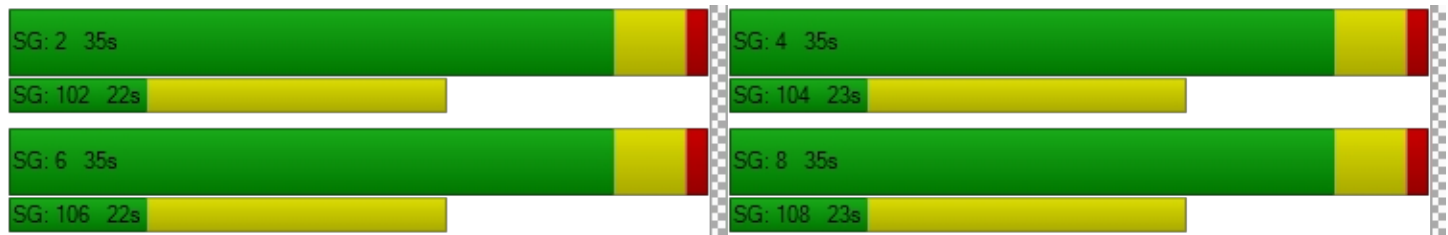
X, volume / capacity	0.11	0.47	0.10	0.10	0.48	0.11	0.45	0.61	0.21	0.65
d, Delay for Lane Group [s/veh]	18.11	13.98	10.20	17.73	14.12	10.28	29.62	17.45	26.41	18.18
Lane Group LOS	B	B	B	B	B	B	C	B	C	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	4.34	0.60	0.47	4.46	0.67	1.62	5.07	0.75	5.56
50th-Percentile Queue Length [ft]	13.48	108.45	15.00	11.77	111.54	16.69	40.60	126.70	18.85	139.08
95th-Percentile Queue Length [veh]	0.97	7.75	1.08	0.85	7.93	1.20	2.92	8.76	1.36	9.43
95th-Percentile Queue Length [ft]	24.26	193.84	26.99	21.19	198.14	30.04	73.08	219.00	33.92	235.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.11	13.98	10.20	17.73	14.12	10.28	29.62	17.45	17.45	26.41	18.18	18.18
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.80			13.81			19.79			19.02		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.54											
Intersection LOS	B											
Intersection V/C	0.483											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST)\ /MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	521	77	58	497	152	104
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	521	77	58	497	152	104
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	21	15	130	45	31
Total Analysis Volume [veh/h]	579	85	61	519	181	124
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	6	6
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.30	0.06	0.07	0.27	0.10	0.08
s, saturation flow rate [veh/h]	1900	1544	837	1900	1810	1549
c, Capacity [veh/h]	846	688	382	846	415	356
d1, Uniform Delay [s]	6.26	4.61	10.98	5.99	9.33	9.13
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	0.03	0.07	0.27	0.27	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

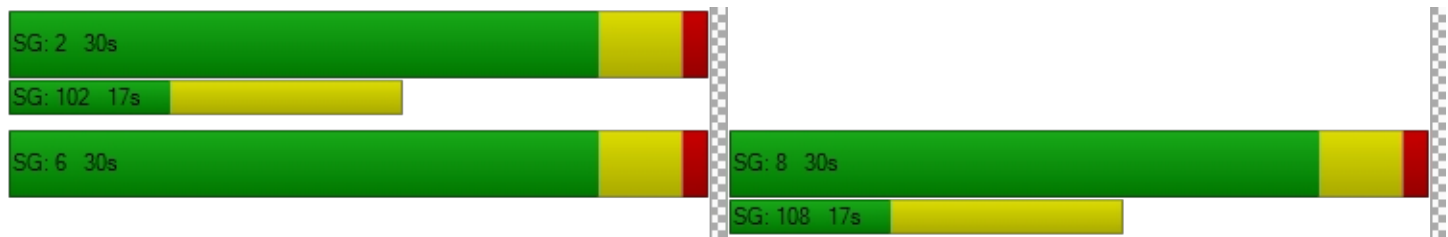
X, volume / capacity	0.68	0.12	0.16	0.61	0.44	0.35
d, Delay for Lane Group [s/veh]	6.63	4.64	11.05	6.26	9.60	9.34
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.30	0.14	0.26	1.10	0.72	0.48
50th-Percentile Queue Length [ft]	32.51	3.42	6.38	27.60	17.92	12.03
95th-Percentile Queue Length [veh]	2.34	0.25	0.46	1.99	1.29	0.87
95th-Percentile Queue Length [ft]	58.52	6.15	11.49	49.69	32.25	21.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.63	4.64	11.05	6.26	9.60	9.34
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	6.38		6.76		9.50	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.14					
Intersection LOS	A					
Intersection V/C	0.405					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	956	78	95	884	44	135	335	150	67	284	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	956	78	95	884	44	135	335	150	67	284	36
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	255	21	26	244	12	37	91	41	22	93	12
Total Analysis Volume [veh/h]	43	1022	83	105	975	49	146	363	163	88	373	47
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	31	31	31	31	31
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.08	0.28	0.05	0.19	0.27	0.27	0.15	0.19	0.11	0.09	0.23
s, saturation flow rate [veh/h]	558	3618	1521	559	1900	1854	973	1900	1550	1024	1853
c, Capacity [veh/h]	252	1792	753	247	941	918	262	740	604	307	722
d1, Uniform Delay [s]	21.85	14.19	10.77	25.40	13.98	14.02	31.90	18.40	16.64	27.19	19.25
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	1.32	0.30	5.26	2.30	2.40	1.86	0.50	0.24	0.51	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

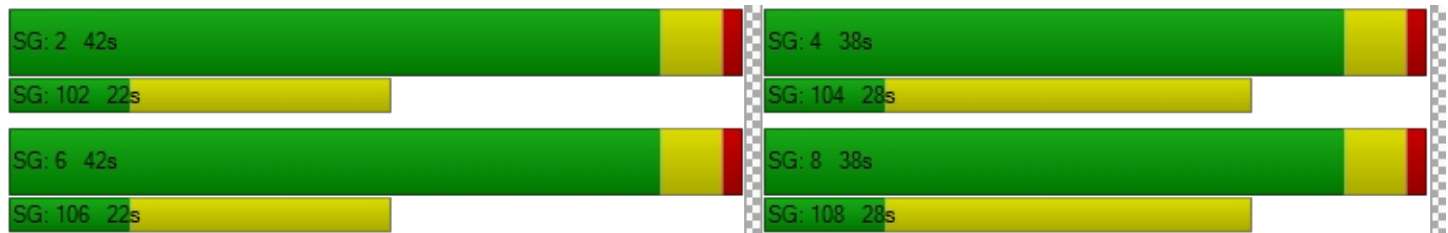
X, volume / capacity	0.17	0.57	0.11	0.42	0.55	0.55	0.56	0.49	0.27	0.29	0.58
d, Delay for Lane Group [s/veh]	23.32	15.51	11.06	30.66	16.27	16.42	33.76	18.91	16.88	27.70	20.01
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.71	6.44	0.81	2.02	6.36	6.29	2.78	4.88	1.98	1.47	6.06
50th-Percentile Queue Length [ft]	17.87	160.89	20.36	50.62	158.91	157.26	69.46	122.07	49.50	36.79	151.49
95th-Percentile Queue Length [veh]	1.29	10.60	1.47	3.64	10.49	10.40	5.00	8.51	3.56	2.65	10.10
95th-Percentile Queue Length [ft]	32.17	264.90	36.65	91.12	262.28	260.09	125.02	212.67	89.10	66.22	252.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.32	15.51	11.06	30.66	16.34	16.42	33.76	18.91	16.88	27.70	20.01	20.01
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.48			17.68			21.64			21.35		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.26											
Intersection LOS	B											
Intersection V/C	0.509											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↵			↵↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	23	196	104	152	149	70	52	536	91	19	418	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	196	104	152	149	70	52	536	91	19	418	23
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	59	32	47	46	22	14	141	24	5	114	6
Total Analysis Volume [veh/h]	28	238	126	187	183	86	55	562	95	21	454	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.31	0.31	0.14	0.06	0.18	0.18	0.03	0.26
s, saturation flow rate [veh/h]	1220	1757	600	600	600	923	1900	1772	784	1875
c, Capacity [veh/h]	119	599	174	204	204	427	1034	964	420	1020
d1, Uniform Delay [s]	38.98	21.89	24.45	24.98	20.26	17.11	10.09	10.14	13.80	11.15
k, delay calibration	0.11	0.15	0.37	0.35	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	1.37	79.39	31.70	1.37	0.62	0.84	0.93	0.23	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

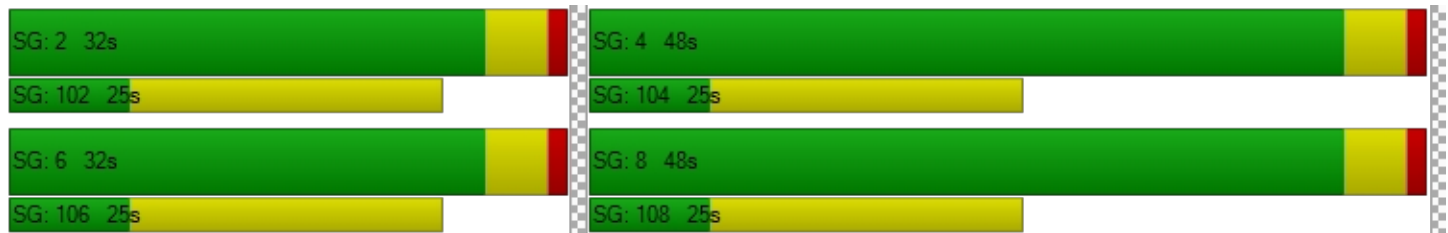
X, volume / capacity	0.24	0.61	1.07	0.90	0.42	0.13	0.33	0.33	0.05	0.47
d, Delay for Lane Group [s/veh]	39.98	23.27	103.85	56.67	21.64	17.73	10.92	11.06	14.03	12.70
Lane Group LOS	D	C	F	E	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.56	5.51	6.66	4.83	1.23	0.73	3.21	3.09	0.24	5.11
50th-Percentile Queue Length [ft]	14.12	137.80	166.59	120.76	30.83	18.26	80.14	77.26	6.06	127.71
95th-Percentile Queue Length [veh]	1.02	9.36	11.33	8.44	2.22	1.31	5.77	5.56	0.44	8.82
95th-Percentile Queue Length [ft]	25.41	234.05	283.28	210.88	55.50	32.86	144.26	139.06	10.90	220.38

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	39.98	23.27	23.27	103.85	56.67	21.64	17.73	10.98	11.06	14.03	12.70	12.70
Movement LOS	D	C	C	F	E	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	24.46			69.41			11.51			12.76		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	27.09											
Intersection LOS	C											
Intersection V/C	0.567											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	42	813	113	103	956	148	58	496	127	86	554	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	813	113	103	956	148	58	496	127	86	554	47
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	223	31	27	246	38	15	131	34	26	167	14
Total Analysis Volume [veh/h]	46	890	124	106	985	153	61	524	134	104	668	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	64	64	73	65	65	37	26	26	37	28	28
g / C, Green / Cycle	0.61	0.53	0.53	0.61	0.54	0.54	0.31	0.22	0.22	0.31	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.07	0.27	0.28	0.15	0.31	0.31	0.07	0.18	0.19	0.10	0.19	0.20
s, saturation flow rate [veh/h]	620	1900	1797	693	1900	1789	893	1900	1690	1046	1900	1812
c, Capacity [veh/h]	360	1011	956	408	1026	966	290	411	365	275	449	428
d1, Uniform Delay [s]	12.38	18.05	18.13	12.20	18.29	18.42	31.73	44.87	45.37	32.36	43.34	43.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	1.85	2.01	1.54	2.27	2.50	0.13	1.66	2.54	0.32	1.42	1.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

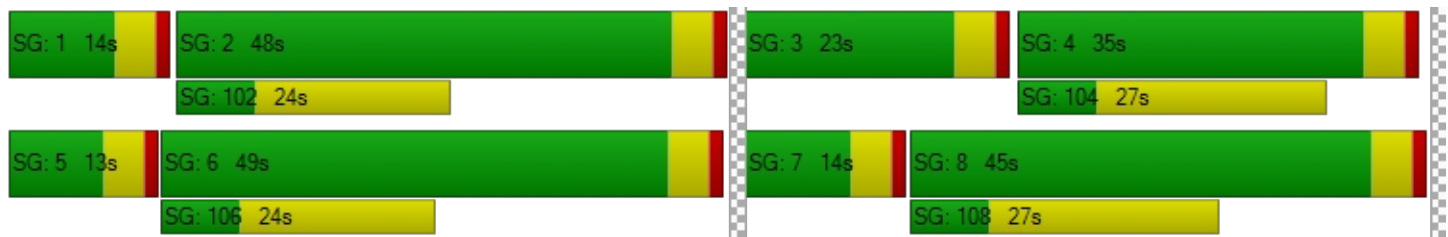
X, volume / capacity	0.13	0.51	0.52	0.26	0.57	0.58	0.21	0.83	0.87	0.38	0.82	0.83
d, Delay for Lane Group [s/veh]	13.11	19.90	20.15	13.74	20.55	20.92	31.86	46.52	47.92	32.68	44.76	45.40
Lane Group LOS	B	B	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.55	9.56	9.23	1.31	11.06	10.71	1.28	9.81	9.36	2.24	10.45	10.27
50th-Percentile Queue Length [ft]	13.69	238.88	230.81	32.66	276.54	267.81	31.92	245.26	233.95	55.93	261.23	256.63
95th-Percentile Queue Length [veh]	0.99	14.62	14.22	2.35	16.52	16.08	2.30	14.95	14.37	4.03	15.75	15.52
95th-Percentile Queue Length [ft]	24.64	365.62	355.39	58.79	412.90	402.00	57.45	373.67	359.37	100.68	393.77	387.99

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.11	20.00	20.15	13.74	20.70	20.92	31.86	47.01	47.92	32.68	45.05	45.40
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	19.72			20.14			45.90			43.52		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.86											
Intersection LOS	C											
Intersection V/C	0.555											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	36	369	97	79	398	107	65	503	98	48	721	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	369	97	79	398	107	65	503	98	48	721	53
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	102	27	22	108	29	16	128	25	15	225	17
Total Analysis Volume [veh/h]	40	409	107	86	433	117	66	511	99	60	902	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.04	0.22	0.07	0.09	0.23	0.07	0.11	0.16	0.17	0.07	0.26	0.26
s, saturation flow rate [veh/h]	969	1900	1568	988	1900	1580	588	1900	1766	818	1900	1836
c, Capacity [veh/h]	398	933	770	414	933	776	184	717	667	291	717	693
d1, Uniform Delay [s]	17.64	11.54	9.72	17.95	11.73	9.78	29.26	16.23	16.30	22.36	18.27	18.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.09	0.09
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	1.50	0.38	1.13	1.66	0.41	0.44	0.16	0.17	0.13	0.96	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.44	0.14	0.21	0.46	0.15	0.36	0.44	0.45	0.21	0.68	0.69
d, Delay for Lane Group [s/veh]	18.14	13.04	10.10	19.09	13.39	10.19	29.69	16.39	16.47	22.49	19.22	19.42
Lane Group LOS	B	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.49	3.93	0.86	1.09	4.24	0.95	1.05	3.48	3.32	0.79	6.26	6.16
50th-Percentile Queue Length [ft]	12.26	98.25	21.53	27.30	106.03	23.68	26.30	86.96	82.97	19.78	156.58	153.97
95th-Percentile Queue Length [veh]	0.88	7.07	1.55	1.97	7.62	1.71	1.89	6.26	5.97	1.42	10.37	10.23
95th-Percentile Queue Length [ft]	22.07	176.85	38.75	49.15	190.47	42.63	47.34	156.52	149.35	35.61	259.19	255.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.14	13.04	10.10	19.09	13.39	10.19	29.69	16.42	16.47	22.49	19.31	19.42
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.84			13.57			17.72			19.50		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.51											
Intersection LOS	B											
Intersection V/C	0.488											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	21	245	21	157	394	161	23	476	113	169	709	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	245	21	157	394	161	23	476	113	169	709	31
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	73	6	45	112	46	6	124	29	45	187	8
Total Analysis Volume [veh/h]	25	294	25	178	447	183	24	495	117	178	749	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.08	0.02	0.16	0.17	0.18	0.03	0.14	0.08	0.20	0.21	0.21
s, saturation flow rate [veh/h]	803	3618	1573	1094	1900	1669	700	3618	1533	903	1900	1866
c, Capacity [veh/h]	402	1821	792	579	956	840	218	1322	560	311	694	682
d1, Uniform Delay [s]	14.25	9.40	8.78	13.32	10.46	10.52	25.33	16.33	15.26	25.79	17.79	17.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.19	0.07	1.37	0.99	1.18	0.08	0.07	0.07	0.62	0.27	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.16	0.03	0.31	0.35	0.36	0.11	0.37	0.21	0.57	0.57	0.57
d, Delay for Lane Group [s/veh]	14.54	9.59	8.85	14.70	11.45	11.71	25.41	16.40	15.33	26.41	18.06	18.08
Lane Group LOS	B	A	A	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.28	1.17	0.19	1.94	2.97	2.74	0.34	2.73	1.21	2.73	4.76	4.69
50th-Percentile Queue Length [ft]	6.99	29.17	4.85	48.49	74.30	68.58	8.44	68.16	30.24	68.30	118.92	117.28
95th-Percentile Queue Length [veh]	0.50	2.10	0.35	3.49	5.35	4.94	0.61	4.91	2.18	4.92	8.33	8.24
95th-Percentile Queue Length [ft]	12.57	52.50	8.73	87.27	133.73	123.44	15.19	122.68	54.43	122.94	208.34	206.08

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.54	9.59	8.85	14.70	11.52	11.71	25.41	16.40	15.33	26.41	18.07	18.08
Movement LOS	B	A	A	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	9.90			12.26			16.54			19.61		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	15.52											
Intersection LOS	B											
Intersection V/C	0.387											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	35	444	71	262	539	112	60	435	157	145	680	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	444	71	262	539	112	60	435	157	145	680	47
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	124	20	69	142	29	16	115	42	45	211	15
Total Analysis Volume [veh/h]	39	494	79	275	567	118	64	462	167	180	842	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	67	50	50	67	57	57	44	29	29	44	33	33
g / C, Green / Cycle	0.56	0.41	0.41	0.56	0.47	0.47	0.36	0.24	0.24	0.36	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.04	0.15	0.16	0.16	0.19	0.19	0.07	0.17	0.18	0.16	0.24	0.24
s, saturation flow rate [veh/h]	896	1900	1793	1755	1900	1764	867	1900	1660	1111	1900	1850
c, Capacity [veh/h]	489	787	742	980	900	836	264	452	395	359	521	508
d1, Uniform Delay [s]	13.18	24.34	24.42	13.87	20.41	20.47	28.56	42.11	42.55	29.08	41.55	41.60
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	1.35	1.46	0.71	1.28	1.41	0.19	0.84	1.15	0.40	4.73	5.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

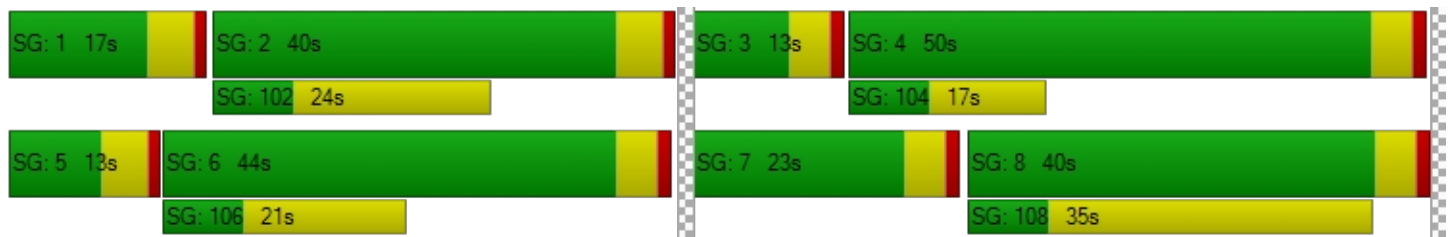
X, volume / capacity	0.08	0.37	0.38	0.28	0.39	0.40	0.24	0.72	0.76	0.50	0.87	0.88
d, Delay for Lane Group [s/veh]	13.50	25.69	25.88	14.58	21.69	21.88	28.75	42.94	43.70	29.49	46.28	46.68
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.57	6.51	6.28	4.49	7.25	6.86	1.23	9.03	8.40	3.70	13.44	13.20
50th-Percentile Queue Length [ft]	14.31	162.64	156.89	112.16	181.13	171.61	30.71	225.78	210.09	92.48	335.88	330.00
95th-Percentile Queue Length [veh]	1.03	10.69	10.38	7.96	11.66	11.16	2.21	13.96	13.16	6.66	19.45	19.16
95th-Percentile Queue Length [ft]	25.76	267.21	259.60	199.00	291.49	279.04	55.28	348.99	328.94	166.47	486.16	478.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.50	25.77	25.88	14.58	21.76	21.88	28.75	43.16	43.70	29.49	46.46	46.68
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	25.00			19.72			41.96			43.65		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	33.02											
Intersection LOS	C											
Intersection V/C	0.504											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	339	456	0	595	684	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	339	456	0	595	684	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	122	0	162	188	0
Total Analysis Volume [veh/h]	363	489	0	648	752	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.20	0.30	0.18	0.21
s, saturation flow rate [veh/h]	1810	1615	3618	3618
c, Capacity [veh/h]	512	457	2224	2224
d1, Uniform Delay [s]	28.90	32.21	8.11	8.41
k, delay calibration	0.17	0.47	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.89	61.31	0.33	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

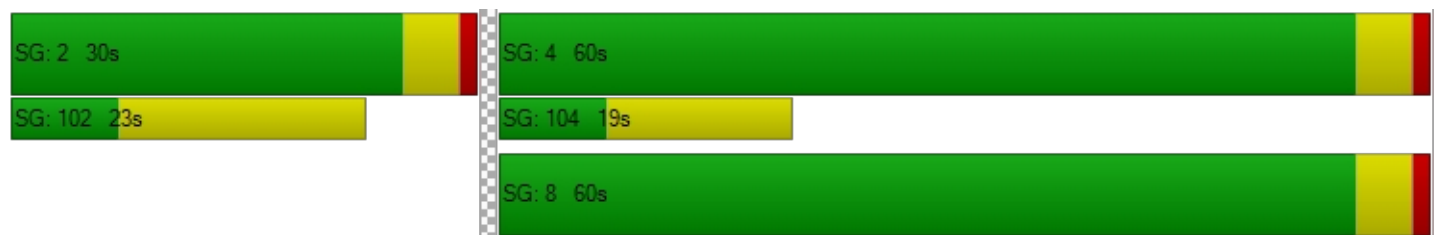
X, volume / capacity	0.71	1.07	0.29	0.34
d, Delay for Lane Group [s/veh]	31.79	93.52	8.45	8.82
Lane Group LOS	C	F	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	6.72	16.62	2.76	3.32
50th-Percentile Queue Length [ft]	168.05	415.54	68.93	82.99
95th-Percentile Queue Length [veh]	10.97	24.29	4.96	5.98
95th-Percentile Queue Length [ft]	274.35	607.20	124.07	149.39

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.79	93.52	0.00	8.45	8.82	0.00
Movement LOS	C	F		A	A	
d_A, Approach Delay [s/veh]	67.22		8.45		8.82	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	30.81					
Intersection LOS	C					
Intersection V/C	0.511					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	35	71	69	15	52	35	31	524	25	18	1004	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	71	69	15	52	35	31	524	25	18	1004	80
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	24	23	5	18	12	9	146	7	5	274	22
Total Analysis Volume [veh/h]	47	96	93	21	71	48	35	585	28	18	1096	87
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	15	15	65	65	65	65	65
g / C, Green / Cycle	0.17	0.17	0.73	0.73	0.73	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.07	0.16	0.16	0.31	0.32
s, saturation flow rate [veh/h]	1637	1617	481	1900	1869	1900	1843
c, Capacity [veh/h]	329	323	355	1380	1357	1380	1338
d1, Uniform Delay [s]	35.92	33.51	8.87	4.02	4.02	4.89	4.96
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.34	0.55	0.38	0.38	0.98	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

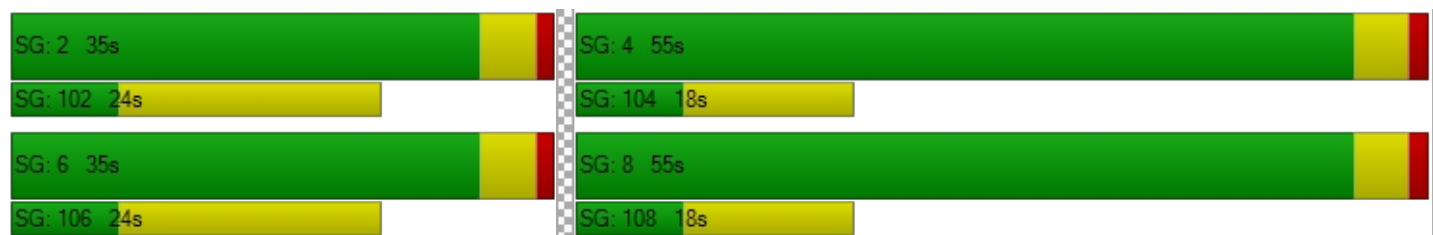
X, volume / capacity	0.72	0.43	0.10	0.22	0.22	0.43	0.44
d, Delay for Lane Group [s/veh]	37.03	33.85	9.42	4.40	4.41	5.87	6.02
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.94	2.70	0.35	1.61	1.59	3.79	3.85
50th-Percentile Queue Length [ft]	123.53	67.56	8.74	40.20	39.71	94.64	96.37
95th-Percentile Queue Length [veh]	8.59	4.86	0.63	2.89	2.86	6.81	6.94
95th-Percentile Queue Length [ft]	214.67	121.60	15.73	72.37	71.48	170.36	173.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.03	37.03	37.03	33.85	33.85	33.85	9.42	4.40	4.41	0.00	5.94	6.02
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	37.03			33.85			4.67			5.95		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	10.67											
Intersection LOS	B											
Intersection V/C	0.465											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	71.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.657

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	115	910	108	88	867	209	31	235	53	449	428	156
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	910	108	88	867	209	31	235	53	449	428	156
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	242	29	22	219	53	9	66	15	124	118	43
Total Analysis Volume [veh/h]	122	967	115	89	876	211	35	262	59	497	474	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	34	25	25	34	24	24	24	24	24	47	47	57
g / C, Green / Cycle	0.38	0.28	0.28	0.38	0.26	0.26	0.26	0.26	0.26	0.52	0.52	0.64
(v / s)_j Volume / Saturation Flow Rate	0.14	0.29	0.31	0.11	0.30	0.32	0.04	0.09	0.09	0.35	0.25	0.11
s, saturation flow rate [veh/h]	849	1900	1734	796	1900	1645	924	1900	1708	1408	1900	1555
c, Capacity [veh/h]	304	527	481	275	496	429	155	498	448	773	988	990
d1, Uniform Delay [s]	22.20	32.58	32.58	22.23	33.31	33.31	39.52	26.83	27.01	14.77	13.84	6.68
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.04	0.04	0.04	0.13	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.91	51.64	73.07	0.67	81.93	120.21	0.27	0.14	0.17	1.10	0.13	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

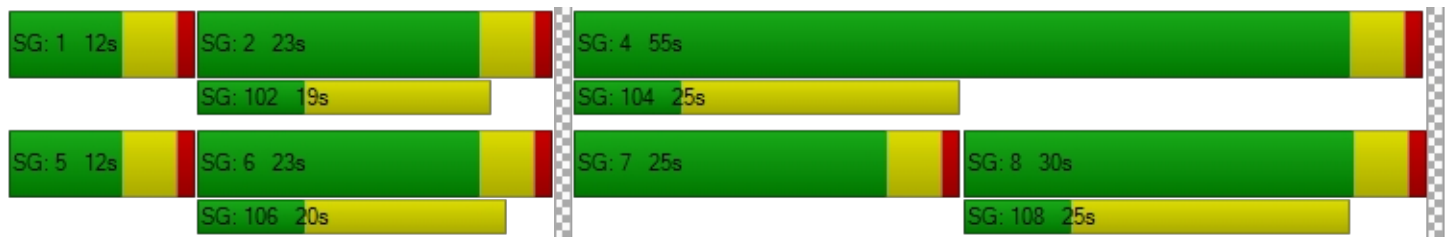
X, volume / capacity	0.40	1.05	1.11	0.32	1.13	1.22	0.23	0.33	0.35	0.64	0.48	0.17
d, Delay for Lane Group [s/veh]	26.11	84.22	105.65	22.90	115.24	153.51	39.79	26.98	27.19	15.88	13.98	6.72
Lane Group LOS	C	F	F	C	F	F	D	C	C	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.96	18.44	19.69	1.22	21.59	23.26	0.74	2.77	2.68	6.50	5.81	1.22
50th-Percentile Queue Length [ft]	48.94	461.12	492.37	30.38	539.79	581.46	18.38	69.22	67.10	162.53	145.27	30.49
95th-Percentile Queue Length [veh]	3.52	26.20	28.64	2.19	31.39	34.82	1.32	4.98	4.83	10.68	9.76	2.20
95th-Percentile Queue Length [ft]	88.09	654.99	715.88	54.69	784.65	870.49	33.08	124.60	120.78	267.07	244.11	54.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.11	93.45	105.65	22.90	128.99	153.51	39.79	27.06	27.19	15.88	13.98	6.72
Movement LOS	C	F	F	C	F	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	87.79			125.36			28.33			13.71		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	71.88											
Intersection LOS	E											
Intersection V/C	0.657											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	42	1086	35	21	915	55	56	134	39	49	68	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1086	35	21	915	55	56	134	39	49	68	63
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	281	9	5	238	14	17	41	12	15	21	20
Total Analysis Volume [veh/h]	43	1124	36	22	953	57	68	164	48	61	85	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	19	19
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.08	0.31	0.31	0.04	0.27	0.27	0.18	0.16
s, saturation flow rate [veh/h]	565	1900	1870	491	1900	1848	1514	1367
c, Capacity [veh/h]	369	1228	1209	319	1228	1195	417	383
d1, Uniform Delay [s]	11.12	7.21	7.23	11.90	6.83	6.85	28.18	27.03
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	1.32	1.35	0.42	1.04	1.08	0.71	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

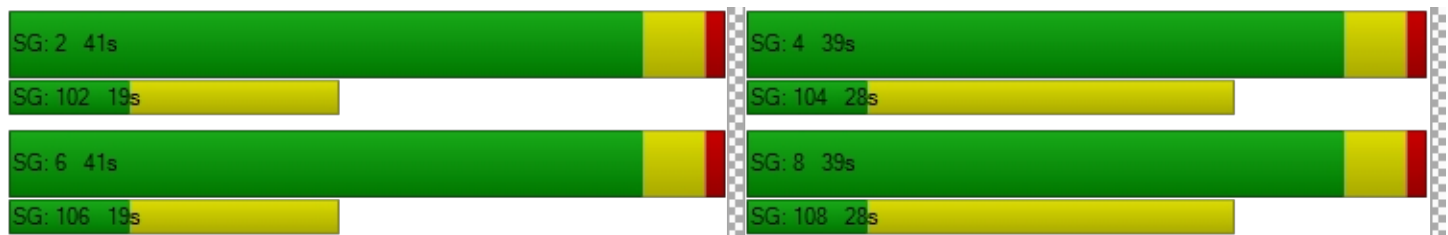
X, volume / capacity	0.12	0.47	0.48	0.07	0.42	0.42	0.67	0.58
d, Delay for Lane Group [s/veh]	11.76	8.53	8.58	12.32	7.87	7.93	28.89	27.56
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.45	4.45	4.43	0.24	3.67	3.62	4.83	3.69
50th-Percentile Queue Length [ft]	11.15	111.34	110.66	5.96	91.81	90.53	120.72	92.34
95th-Percentile Queue Length [veh]	0.80	7.91	7.88	0.43	6.61	6.52	8.43	6.65
95th-Percentile Queue Length [ft]	20.07	197.86	196.92	10.74	165.27	162.96	210.81	166.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.76	8.55	8.58	12.32	7.90	7.93	28.89	28.89	28.89	27.56	27.56	27.56
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.67			7.99			28.89			27.56		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.02											
Intersection LOS	B											
Intersection V/C	0.494											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	19	982	13	22	1314	211	61	68	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	19	982	13	22	1314	211	61	68	37
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	5	253	3	6	346	56	18	22	11
Total Analysis Volume [veh/h]	0	0	0	20	1011	13	23	1383	222	71	89	43
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0	
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0	
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	C	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		98	98	98	98	98	98	12	12
g / C, Green / Cycle		0.82	0.82	0.82	0.82	0.82	0.82	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate		0.06	0.27	0.27	0.04	0.43	0.44	0.09	0.03
s, saturation flow rate [veh/h]		321	1900	1890	559	1900	1797	1859	1472
c, Capacity [veh/h]		271	1560	1552	470	1560	1476	190	150
d1, Uniform Delay [s]		7.49	2.62	2.62	4.48	3.35	3.42	52.85	49.75
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.53	0.56	0.57	0.20	1.25	1.40	3.90	0.39
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.07	0.33	0.33	0.05	0.52	0.54	0.84	0.29
d, Delay for Lane Group [s/veh]		8.01	3.19	3.19	4.67	4.60	4.82	56.75	50.14
Lane Group LOS		A	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.22	2.41	2.40	0.18	5.23	5.25	4.90	1.20
50th-Percentile Queue Length [ft]		5.54	60.16	59.95	4.40	130.87	131.18	122.39	30.07
95th-Percentile Queue Length [veh]		0.40	4.33	4.32	0.32	8.99	9.00	8.52	2.16
95th-Percentile Queue Length [ft]		9.96	108.29	107.91	7.91	224.67	225.09	213.10	54.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.01	3.19	3.19	4.67	4.69	4.82	56.75	56.75	50.14
Movement LOS				A	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			3.28			4.71			55.35		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	7.77											
Intersection LOS	A											
Intersection V/C	0.527											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌			⇌⇌			⇌⇌			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	14	1241	177	203	1012	25	164	9	106	14	4	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	1241	177	203	1012	25	164	9	106	14	4	6
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	316	45	53	263	6	46	3	30	5	1	2
Total Analysis Volume [veh/h]	14	1265	180	211	1051	26	186	10	120	21	6	9
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	86	86	86	15	15	5
g / C, Green / Cycle	0.62	0.62	0.72	0.72	0.72	0.13	0.13	0.04
(v / s)_j Volume / Saturation Flow Rate	0.41	0.42	0.39	0.28	0.29	0.11	0.08	0.02
s, saturation flow rate [veh/h]	1863	1624	536	1900	1882	1814	1553	1770
c, Capacity [veh/h]	1188	1009	367	1365	1353	227	194	73
d1, Uniform Delay [s]	14.47	14.92	16.79	6.63	6.64	51.44	49.73	56.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	3.73	6.42	0.86	0.87	3.76	1.19	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

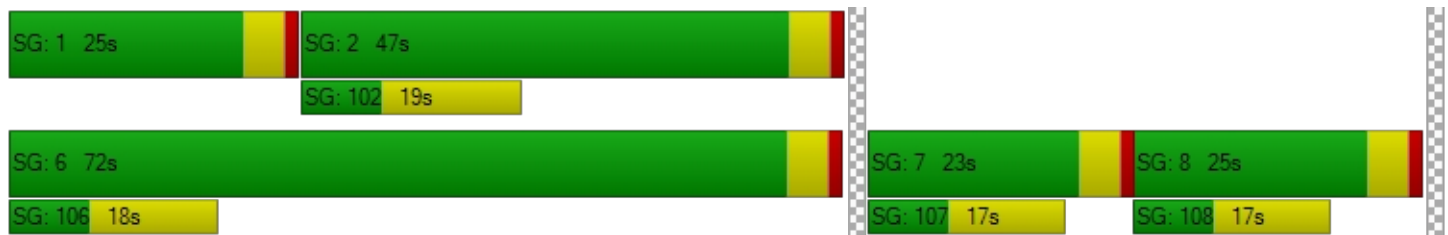
X, volume / capacity	0.65	0.68	0.58	0.40	0.40	0.86	0.62	0.50
d, Delay for Lane Group [s/veh]	17.22	18.65	23.21	7.50	7.51	55.21	50.92	58.23
Lane Group LOS	B	B	C	A	A	E	D	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	13.22	12.38	2.15	5.06	5.03	6.06	3.51	1.10
50th-Percentile Queue Length [ft]	330.46	309.57	53.75	126.42	125.64	151.46	87.73	27.48
95th-Percentile Queue Length [veh]	19.18	18.15	3.87	8.74	8.70	10.10	6.32	1.98
95th-Percentile Queue Length [ft]	479.53	453.85	96.75	218.62	217.55	252.38	157.92	49.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.22	17.79	18.65	23.21	7.50	7.51	55.21	55.21	50.92	58.23	58.23	58.23
Movement LOS	B	B	B	C	A	A	E	E	D	E	E	E
d_A, Approach Delay [s/veh]	17.89			10.08			53.58			58.23		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	18.75											
Intersection LOS	B											
Intersection V/C	0.594											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	535	65	141	771	6	148	257	117	24	212	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	535	65	141	771	6	148	257	117	24	212	62
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	149	18	38	207	2	42	72	33	7	61	18
Total Analysis Volume [veh/h]	0	595	72	152	830	6	167	289	132	28	245	72
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	54	54	27	27	27	27	27
g / C, Green / Cycle	0.47	0.60	0.60	0.30	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.36	0.16	0.44	0.15	0.24	0.03	0.13	0.05
s, saturation flow rate [veh/h]	1854	963	1897	1149	1788	981	1900	1550
c, Capacity [veh/h]	872	468	1135	272	535	133	569	464
d1, Uniform Delay [s]	19.70	12.68	12.97	36.54	28.88	41.45	25.35	23.16
k, delay calibration	0.50	0.32	0.50	0.04	0.17	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.33	1.18	4.28	0.84	4.05	0.29	0.19	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

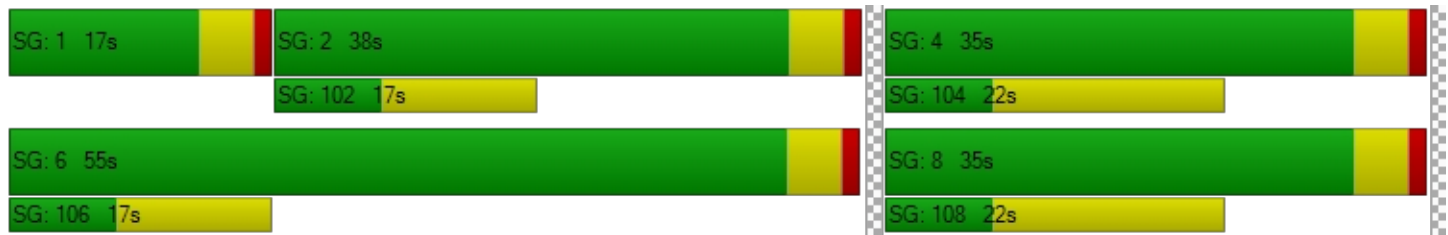
X, volume / capacity	0.76	0.32	0.74	0.61	0.79	0.21	0.43	0.16
d, Delay for Lane Group [s/veh]	26.03	13.86	17.25	37.38	32.93	41.74	25.54	23.21
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	12.09	1.27	11.38	3.57	8.65	0.62	4.20	1.13
50th-Percentile Queue Length [ft]	302.15	31.71	284.62	89.16	216.21	15.38	105.10	28.20
95th-Percentile Queue Length [veh]	17.79	2.28	16.92	6.42	13.47	1.11	7.57	2.03
95th-Percentile Queue Length [ft]	444.68	57.07	422.96	160.49	336.78	27.69	189.16	50.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	26.03	26.03	13.86	17.25	17.25	37.38	32.93	32.93	41.74	25.54	23.21
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		26.03		16.73			34.19			26.37		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]	24.38											
Intersection LOS	C											
Intersection V/C	0.676											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.336

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	28	578	495	12	7	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	578	495	12	7	11
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	152	135	3	3	4
Total Analysis Volume [veh/h]	29	607	539	13	11	17
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	19	19	19	19
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	1
g / C, Green / Cycle	0.46	0.46	0.46	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.32	0.29	0.02
s, saturation flow rate [veh/h]	866	1900	1891	1686
c, Capacity [veh/h]	515	865	861	100
d1, Uniform Delay [s]	6.98	4.13	3.97	8.53
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.39	0.30	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

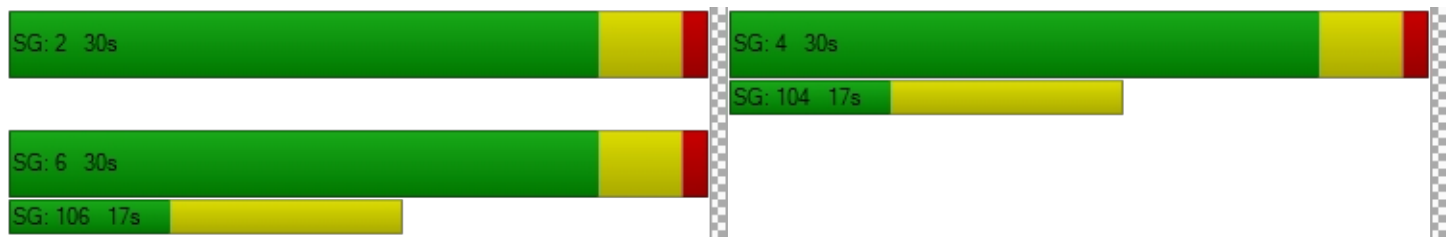
X, volume / capacity	0.06	0.70	0.64	0.28
d, Delay for Lane Group [s/veh]	7.00	4.52	4.27	9.09
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.26	0.22	0.07
50th-Percentile Queue Length [ft]	1.38	6.52	5.43	1.70
95th-Percentile Queue Length [veh]	0.10	0.47	0.39	0.12
95th-Percentile Queue Length [ft]	2.49	11.73	9.77	3.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.00	4.52	4.27	4.27	9.09	9.09
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.64		4.27		9.09	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.57					
Intersection LOS	A					
Intersection V/C	0.336					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	892	210	144	1026	517	208
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	892	210	144	1026	517	208
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	238	56	40	282	152	61
Total Analysis Volume [veh/h]	952	224	159	1129	608	244
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	70	70	12	87	23	23
g / C, Green / Cycle	0.59	0.59	0.10	0.73	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.31	0.33	0.09	0.31	0.17	0.16
s, saturation flow rate [veh/h]	1900	1772	1810	3618	3514	1545
c, Capacity [veh/h]	1117	1041	187	2638	682	300
d1, Uniform Delay [s]	14.76	15.25	52.86	6.39	47.07	46.23
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.78	2.22	4.21	0.51	1.68	2.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.53	0.56	0.85	0.43	0.89	0.81
d, Delay for Lane Group [s/veh]	16.54	17.47	57.07	6.90	48.75	48.28
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	10.00	10.40	4.92	5.23	8.97	7.11
50th-Percentile Queue Length [ft]	249.91	260.07	123.08	130.79	224.13	177.82
95th-Percentile Queue Length [veh]	15.18	15.69	8.56	8.98	13.88	11.49
95th-Percentile Queue Length [ft]	379.54	392.30	214.05	224.57	346.89	287.17

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.89	17.47	57.07	6.90	48.75	48.28
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	17.00		13.10		48.62	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	23.61					
Intersection LOS	C					
Intersection V/C	0.593					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	36	390	137	71	280	36	259	625	83	32	438	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	390	137	71	280	36	259	625	83	32	438	15
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	110	39	21	84	11	75	182	24	10	133	5
Total Analysis Volume [veh/h]	41	441	155	85	336	43	301	726	96	39	531	18
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.04	0.23	0.10	0.09	0.18	0.03	0.25	0.22	0.23	0.06	0.15	0.15
s, saturation flow rate [veh/h]	1053	1900	1538	954	1900	1566	1190	1900	1777	669	1900	1858
c, Capacity [veh/h]	412	841	681	335	841	693	546	810	758	138	481	471
d1, Uniform Delay [s]	18.22	14.22	12.14	22.04	13.26	11.23	14.80	14.83	14.94	33.41	22.92	22.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.08	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	2.34	0.78	1.81	1.42	0.17	0.66	0.19	0.22	0.41	0.40	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

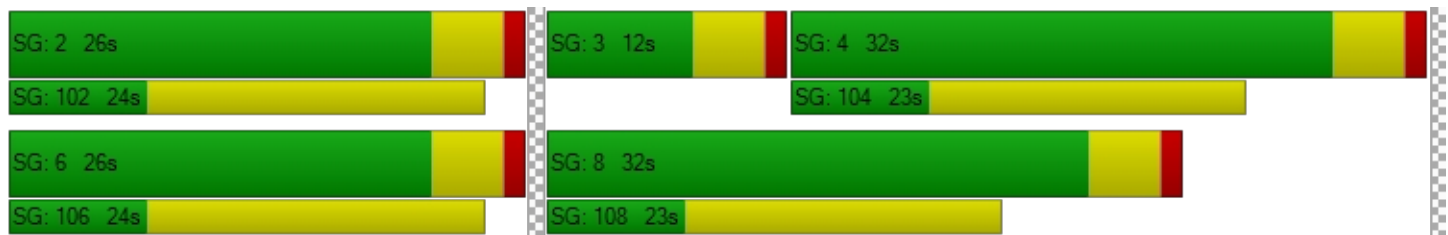
X, volume / capacity	0.10	0.52	0.23	0.25	0.40	0.06	0.55	0.52	0.53	0.28	0.57	0.58
d, Delay for Lane Group [s/veh]	18.70	16.55	12.92	23.85	14.68	11.40	15.46	15.02	15.16	33.82	23.32	23.39
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.51	4.99	1.48	1.25	3.49	0.38	3.10	4.51	4.37	0.66	3.81	3.79
50th-Percentile Queue Length [ft]	12.73	124.85	37.06	31.33	87.32	9.39	77.38	112.65	109.14	16.50	95.36	94.68
95th-Percentile Queue Length [veh]	0.92	8.66	2.67	2.26	6.29	0.68	5.57	7.99	7.79	1.19	6.87	6.82
95th-Percentile Queue Length [ft]	22.92	216.47	66.70	56.39	157.18	16.90	139.28	199.68	194.81	29.69	171.64	170.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.70	16.55	12.92	23.85	14.68	11.40	15.46	15.08	15.16	33.82	23.36	23.39
Movement LOS	B	B	B	C	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.81			16.06			15.19			24.05		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.32											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.662

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	43	393	388	244	423	70	168	822	199	36	646	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	393	388	244	423	70	168	822	199	36	646	38
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	114	113	70	122	20	47	228	55	10	181	11
Total Analysis Volume [veh/h]	50	458	452	281	487	81	187	913	221	40	725	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	23	56	15	32	32	9	58	78	5	55	55
g / C, Green / Cycle	0.05	0.19	0.47	0.13	0.27	0.27	0.07	0.49	0.65	0.04	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.13	0.29	0.10	0.15	0.15	0.05	0.25	0.14	0.02	0.20	0.21
s, saturation flow rate [veh/h]	1810	3618	1563	2796	1900	1788	3514	3618	1573	1810	1900	1854
c, Capacity [veh/h]	86	686	732	372	514	484	258	1756	1026	78	865	844
d1, Uniform Delay [s]	55.95	45.08	23.85	52.62	37.69	37.77	54.38	21.25	8.45	56.14	22.38	22.41
k, delay calibration	0.04	0.04	0.42	0.04	0.04	0.04	0.04	0.50	0.44	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.29	0.42	3.27	1.18	0.37	0.40	1.45	1.11	0.42	1.91	1.68	1.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.58	0.67	0.62	0.76	0.57	0.57	0.72	0.52	0.22	0.51	0.45	0.45
d, Delay for Lane Group [s/veh]	58.25	45.50	27.12	53.81	38.06	38.17	55.83	22.36	8.88	58.06	24.06	24.15
Lane Group LOS	E	D	C	D	D	D	E	C	A	E	C	C
Critical Lane Group	No	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.54	6.36	10.11	4.24	7.42	7.08	2.82	8.98	2.36	1.23	7.84	7.71
50th-Percentile Queue Length [ft]	38.47	159.11	252.68	105.88	185.39	176.89	70.44	224.45	59.00	30.70	195.96	192.76
95th-Percentile Queue Length [veh]	2.77	10.50	15.32	7.61	11.88	11.44	5.07	13.89	4.25	2.21	12.43	12.26
95th-Percentile Queue Length [ft]	69.25	262.55	383.02	190.26	297.03	285.95	126.80	347.30	106.19	55.26	310.75	306.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.25	45.50	27.12	53.81	38.10	38.17	55.83	22.36	8.88	58.06	24.10	24.15
Movement LOS	E	D	C	D	D	D	E	C	A	E	C	C
d_A, Approach Delay [s/veh]	37.51			43.31			24.84			25.79		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.11											
Intersection LOS	C											
Intersection V/C	0.662											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	55.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.817

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T			T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	91	407	188	313	681	78	314	946	28	153	1075	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	407	188	313	681	78	314	946	28	153	1075	57
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	114	53	80	174	20	93	280	8	42	292	15
Total Analysis Volume [veh/h]	102	456	210	320	696	80	372	1119	33	166	1168	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	24	24	13	28	28	15	57	57	8	50	50
g / C, Green / Cycle	0.07	0.20	0.20	0.11	0.23	0.23	0.12	0.48	0.48	0.06	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.06	0.13	0.14	0.09	0.19	0.05	0.11	0.21	0.21	0.05	0.45	0.46
s, saturation flow rate [veh/h]	1810	3618	1505	3514	3618	1509	3514	3618	1862	3514	1800	900
c, Capacity [veh/h]	127	710	296	376	843	352	435	1730	890	228	755	377
d1, Uniform Delay [s]	54.88	44.27	44.97	52.56	43.63	37.20	51.44	20.65	20.68	54.99	34.79	34.79
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	1.39	4.45	2.12	2.99	0.46	1.90	0.81	1.59	1.67	55.89	77.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

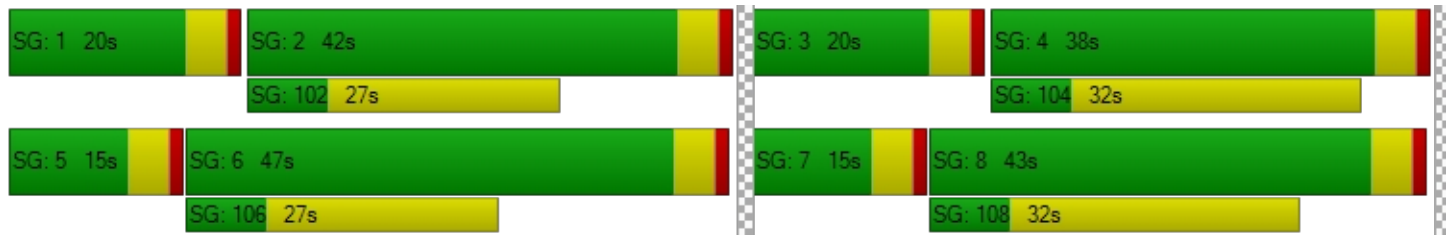
X, volume / capacity	0.80	0.64	0.71	0.85	0.83	0.23	0.85	0.44	0.44	0.73	1.08	1.10
d, Delay for Lane Group [s/veh]	59.27	45.66	49.42	54.68	46.62	37.67	53.34	21.46	22.26	56.66	90.69	112.08
Lane Group LOS	E	D	D	D	D	D	D	C	C	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	3.34	6.72	6.52	4.72	9.82	1.90	5.58	7.15	7.60	2.52	16.55	18.80
50th-Percentile Queue Length [ft]	83.42	167.96	163.07	117.96	245.44	47.53	139.60	178.81	190.12	62.90	413.85	469.89
95th-Percentile Queue Length [veh]	6.01	10.97	10.71	8.28	14.96	3.42	9.46	11.54	12.13	4.53	24.44	27.69
95th-Percentile Queue Length [ft]	150.15	274.24	267.78	207.03	373.90	85.56	236.49	288.46	303.19	113.22	611.04	692.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.27	45.66	49.42	54.68	46.62	37.67	53.34	21.72	22.26	56.66	97.18	112.08
Movement LOS	E	D	D	D	D	D	D	C	C	E	F	F
d_A, Approach Delay [s/veh]	48.50			48.32			29.45			93.02		
Approach LOS	D			D			C			F		
d_I, Intersection Delay [s/veh]	55.38											
Intersection LOS	E											
Intersection V/C	0.817											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	4	110	76	1	81	63	1484	11	32	1429	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	4	110	76	1	81	63	1484	11	32	1429	22
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	1	40	25	0	27	16	379	3	8	376	6
Total Analysis Volume [veh/h]	72	6	158	100	1	107	64	1516	11	34	1503	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	19	19	6	83	83	5	81	81
g / C, Green / Cycle	0.16	0.16	0.16	0.16	0.16	0.05	0.69	0.69	0.04	0.68	0.68
(v / s)_j Volume / Saturation Flow Rate	0.06	0.00	0.10	0.07	0.07	0.04	0.28	0.28	0.02	0.56	0.58
s, saturation flow rate [veh/h]	1296	1900	1566	1410	1578	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	156	296	244	249	246	93	2494	1305	72	1220	610
d1, Uniform Delay [s]	54.42	42.87	47.53	48.44	45.87	55.95	8.01	8.01	56.39	14.09	14.89
k, delay calibration	0.04	0.04	0.04	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	0.01	1.08	1.05	1.23	3.33	0.48	0.92	1.81	6.34	14.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

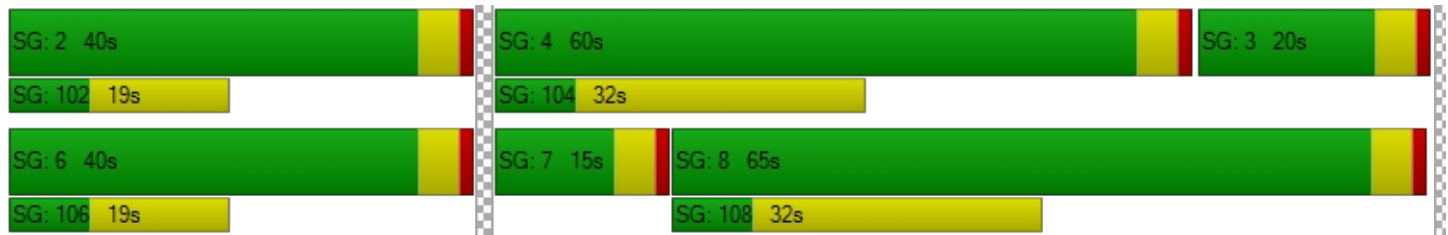
X, volume / capacity	0.46	0.02	0.65	0.40	0.44	0.69	0.40	0.40	0.47	0.82	0.86
d, Delay for Lane Group [s/veh]	55.21	42.88	48.60	49.49	47.10	59.27	8.49	8.93	58.19	20.43	29.37
Lane Group LOS	E	D	D	D	D	E	A	A	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.15	0.15	4.47	2.85	2.99	1.99	5.34	5.75	1.05	9.97	12.25
50th-Percentile Queue Length [ft]	53.74	3.79	111.79	71.15	74.65	49.81	133.42	143.63	26.13	249.23	306.20
95th-Percentile Queue Length [veh]	3.87	0.27	7.94	5.12	5.38	3.59	9.13	9.68	1.88	15.15	17.99
95th-Percentile Queue Length [ft]	96.74	6.82	198.49	128.07	134.38	89.65	228.13	241.91	47.03	378.69	449.69

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.21	42.88	48.60	49.49	47.10	47.10	59.27	8.64	8.93	58.19	23.40	29.37
Movement LOS	E	D	D	D	D	D	E	A	A	E	C	C
d_A, Approach Delay [s/veh]	50.47			48.25			10.68			24.25		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]	21.35											
Intersection LOS	C											
Intersection V/C	0.717											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.825

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	535	1338	278	0	0	1617
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	535	1338	278	0	0	1617
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	138	345	74	0	0	434
Total Analysis Volume [veh/h]	552	1380	296	0	0	1736
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	96	15	83
g / C, Green / Cycle	0.23	0.80	0.12	0.70
(v / s)_i Volume / Saturation Flow Rate	0.16	0.49	0.08	0.67
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	802	2259	445	1807
d1, Uniform Delay [s]	42.40	4.68	50.26	16.77
k, delay calibration	0.04	0.40	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.99	0.64	13.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

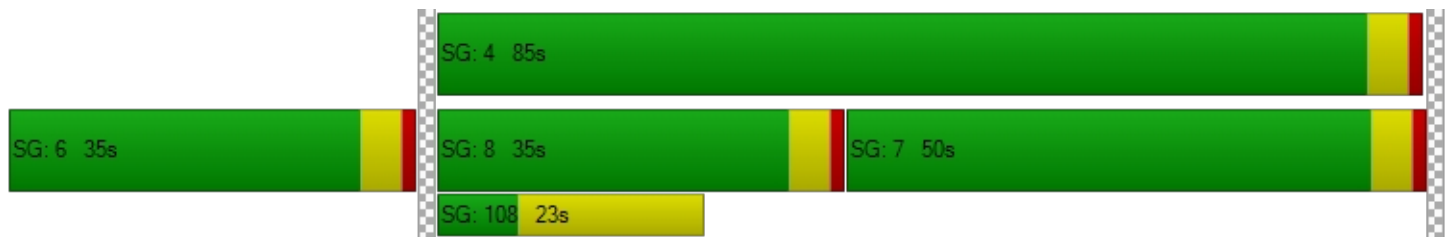
X, volume / capacity	0.69	0.61	0.67	0.96
d, Delay for Lane Group [s/veh]	42.79	5.67	50.91	30.45
Lane Group LOS	D	A	D	C
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.15	3.86	4.29	11.20
50th-Percentile Queue Length [ft]	178.87	96.53	107.18	280.07
95th-Percentile Queue Length [veh]	11.54	6.95	7.68	16.69
95th-Percentile Queue Length [ft]	288.54	173.75	192.07	417.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.79	5.67	50.91	0.00	0.00	30.45
Movement LOS	D	A	D			C
d_A, Approach Delay [s/veh]	16.27		50.91		30.45	
Approach LOS	B		D		C	
d_I, Intersection Delay [s/veh]	25.07					
Intersection LOS	C					
Intersection V/C	0.825					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	28.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.932

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	45	0	0	0	0	277	187	883	1289	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	45	0	0	0	0	277	187	883	1289	0
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	13	0	0	0	0	85	57	235	344	0
Total Analysis Volume [veh/h]	0	0	52	0	0	0	0	339	229	942	1374	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			21	21	90	115	115
g / C, Green / Cycle			0.17	0.17	0.75	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.09	0.15	0.79	0.36	0.36
s, saturation flow rate [veh/h]			3618	1553	1200	1900	1900
c, Capacity [veh/h]			624	268	901	1827	1827
d1, Uniform Delay [s]			45.30	48.15	14.94	0.14	0.14
k, delay calibration			0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.27	3.03	42.59	0.59	0.59
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

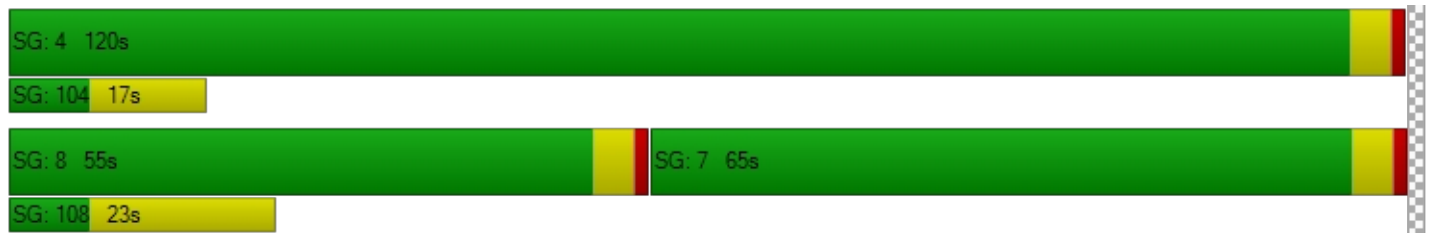
X, volume / capacity			0.54	0.85	1.05	0.38	0.38
d, Delay for Lane Group [s/veh]			45.57	51.18	57.53	0.73	0.73
Lane Group LOS			D	D	F	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			4.64	6.86	15.13	0.30	0.30
50th-Percentile Queue Length [ft]			116.00	171.39	378.33	7.52	7.52
95th-Percentile Queue Length [veh]			8.17	11.15	22.32	0.54	0.54
95th-Percentile Queue Length [ft]			204.32	278.73	558.08	13.53	13.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.57	51.18	57.53	0.73	0.73
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			47.83			23.83		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	28.56											
Intersection LOS	C											
Intersection V/C	0.932											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┤			┼			┆┆			┆┆┤		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	37	54	21	25	36	16	423	23	78	1279	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	37	54	21	25	36	16	423	23	78	1279	32
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	12	18	8	9	13	5	122	6	21	340	9
Total Analysis Volume [veh/h]	19	48	70	31	37	53	19	489	24	83	1359	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	92	92	92	92
g / C, Green / Cycle	0.15	0.15	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.07	0.10	0.16	0.15	0.43	0.42
s, saturation flow rate [veh/h]	1625	1179	1578	1729	1735	1710
c, Capacity [veh/h]	250	219	1246	1330	1368	1316
d1, Uniform Delay [s]	46.25	47.64	3.67	3.76	5.28	5.55
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	0.81	0.36	0.33	1.59	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

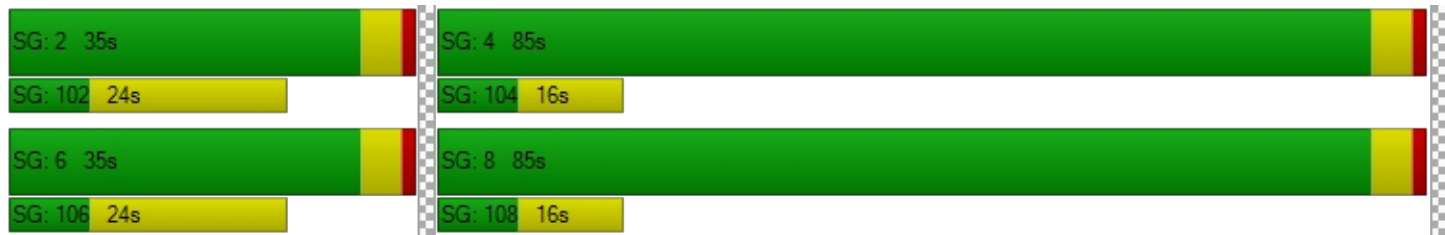
X, volume / capacity	0.47	0.55	0.20	0.20	0.55	0.55
d, Delay for Lane Group [s/veh]	46.76	48.44	4.03	4.09	6.87	7.22
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.22	3.49	1.49	1.60	6.57	6.68
50th-Percentile Queue Length [ft]	80.62	87.37	37.29	40.03	164.23	167.10
95th-Percentile Queue Length [veh]	5.80	6.29	2.68	2.88	10.77	10.92
95th-Percentile Queue Length [ft]	145.11	157.27	67.11	72.06	269.32	273.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	46.76	46.76	48.44	48.44	48.44	4.03	4.06	0.00	6.87	7.05	7.22
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		46.76		48.44			4.06			7.04		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	10.72											
Intersection LOS	B											
Intersection V/C	0.535											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	320	1015	19	51	548	100	36	146	28	331	353	660
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	1015	19	51	548	100	36	146	28	331	353	660
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	262	5	14	147	27	11	43	8	87	93	174
Total Analysis Volume [veh/h]	330	1046	20	55	590	108	43	172	33	350	373	697
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	34	57	57	5	28	28	27	27	27	44	44	83
g / C, Green / Cycle	0.28	0.48	0.48	0.04	0.23	0.23	0.23	0.23	0.23	0.37	0.37	0.69
(v / s)_j Volume / Saturation Flow Rate	0.09	0.28	0.28	0.03	0.19	0.19	0.04	0.09	0.02	0.25	0.20	0.44
s, saturation flow rate [veh/h]	3514	1900	1882	1810	1900	1745	1017	1900	1508	1428	1900	1578
c, Capacity [veh/h]	999	905	896	72	440	404	117	432	343	521	701	1092
d1, Uniform Delay [s]	33.90	22.89	22.93	57.06	43.65	44.00	55.84	39.37	36.60	31.63	29.70	10.20
k, delay calibration	0.50	0.50	0.50	0.04	0.21	0.23	0.04	0.04	0.04	0.16	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	2.83	2.88	6.32	6.96	9.67	0.72	0.22	0.04	2.16	0.24	2.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

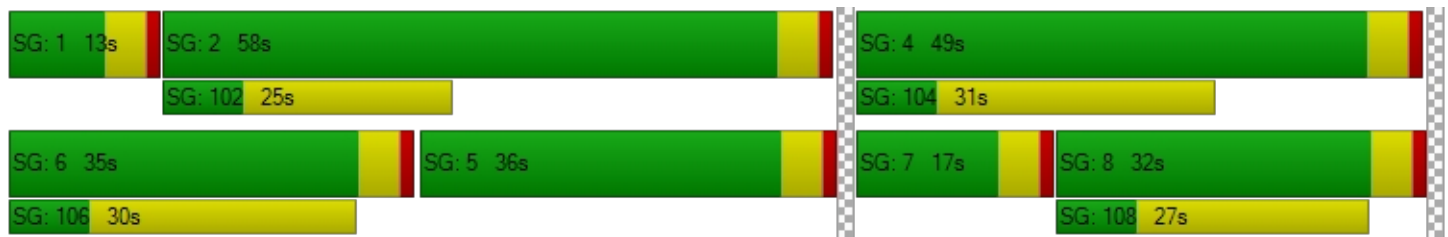
X, volume / capacity	0.33	0.59	0.59	0.77	0.81	0.84	0.37	0.40	0.10	0.67	0.53	0.64
d, Delay for Lane Group [s/veh]	34.79	25.72	25.82	63.38	50.62	53.67	56.56	39.59	36.65	33.80	29.94	13.06
Lane Group LOS	C	C	C	E	D	D	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.90	11.38	11.35	1.76	10.78	10.59	1.30	4.31	0.77	8.18	8.46	10.09
50th-Percentile Queue Length [ft]	97.55	284.58	283.80	44.12	269.45	264.63	32.40	107.63	19.19	204.48	211.49	252.14
95th-Percentile Queue Length [veh]	7.02	16.92	16.88	3.18	16.16	15.92	2.33	7.71	1.38	12.87	13.23	15.29
95th-Percentile Queue Length [ft]	175.60	422.91	421.94	79.42	404.05	398.03	58.32	192.70	34.54	321.74	330.74	382.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.79	25.77	25.82	63.38	51.82	53.67	56.56	39.59	36.65	33.80	29.94	13.06
Movement LOS	C	C	C	E	D	D	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	27.90			52.93			42.14			22.60		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	31.79											
Intersection LOS	C											
Intersection V/C	0.698											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	70	595	756	51	76	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	595	756	51	76	165
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	160	203	14	21	45
Total Analysis Volume [veh/h]	75	641	813	55	83	181
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	77	77	68	68	14	14
g / C, Green / Cycle	0.77	0.77	0.68	0.68	0.14	0.14
(v / s)_j Volume / Saturation Flow Rate	0.10	0.34	0.43	0.03	0.05	0.12
s, saturation flow rate [veh/h]	785	1900	1900	1591	1810	1526
c, Capacity [veh/h]	544	1462	1290	1081	251	211
d1, Uniform Delay [s]	6.20	4.01	8.99	5.33	38.86	42.07
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	0.96	2.34	0.09	0.28	3.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.44	0.63	0.05	0.33	0.86
d, Delay for Lane Group [s/veh]	6.73	4.97	11.33	5.42	39.15	45.91
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.32	3.36	8.75	0.34	1.83	4.50
50th-Percentile Queue Length [ft]	8.00	83.92	218.74	8.60	45.75	112.47
95th-Percentile Queue Length [veh]	0.58	6.04	13.60	0.62	3.29	7.98
95th-Percentile Queue Length [ft]	14.40	151.05	340.02	15.48	82.35	199.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.73	4.97	11.33	5.42	39.15	45.91
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	5.15		10.96		43.79	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	13.40					
Intersection LOS	B					
Intersection V/C	0.559					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	119	696	73	138	688	258	91	355	168	179	264	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	696	73	138	688	258	91	355	168	179	264	95
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	184	19	36	182	68	24	94	44	47	69	25
Total Analysis Volume [veh/h]	126	737	77	146	726	272	96	375	177	188	277	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	45	45	12	46	46	26	26	26	20	20	20
g / C, Green / Cycle	0.08	0.37	0.37	0.10	0.38	0.38	0.21	0.21	0.21	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.07	0.20	0.05	0.08	0.20	0.18	0.05	0.20	0.11	0.10	0.15	0.06
s, saturation flow rate [veh/h]	1810	3618	1530	1810	3618	1551	1810	1900	1544	1810	1900	1549
c, Capacity [veh/h]	154	1349	571	174	1390	596	388	407	331	295	310	253
d1, Uniform Delay [s]	54.04	29.65	24.86	53.33	28.47	27.60	39.14	46.18	41.86	46.90	49.20	44.93
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.23	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.08	1.59	0.49	4.05	1.41	2.51	0.12	16.09	0.50	0.85	6.33	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.55	0.13	0.84	0.52	0.46	0.25	0.92	0.54	0.64	0.89	0.40
d, Delay for Lane Group [s/veh]	58.12	31.25	25.35	57.39	29.88	30.11	39.26	62.27	42.37	47.75	55.53	45.30
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.89	8.53	1.52	4.74	8.89	6.67	2.35	12.61	4.66	5.27	8.59	2.68
50th-Percentile Queue Length [ft]	97.17	213.18	37.99	118.46	222.15	166.81	58.86	315.21	116.57	131.79	214.64	66.92
95th-Percentile Queue Length [veh]	7.00	13.32	2.74	8.31	13.77	10.91	4.24	18.43	8.20	9.04	13.39	4.82
95th-Percentile Queue Length [ft]	174.90	332.91	68.38	207.71	344.36	272.72	105.94	460.80	205.10	225.92	334.78	120.46

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.12	31.25	25.35	57.39	29.88	30.11	39.26	62.27	42.37	47.75	55.53	45.30
Movement LOS	E	C	C	E	C	C	D	E	D	D	E	D
d_A, Approach Delay [s/veh]	34.37			33.44			53.42			51.13		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	40.67											
Intersection LOS	D											
Intersection V/C	0.628											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	98	459	55	33	437	106	73	515	157	80	352	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	98	459	55	33	437	106	73	515	157	80	352	67
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	16	9	121	29	20	138	42	22	99	19
Total Analysis Volume [veh/h]	111	519	62	36	483	117	78	553	169	90	395	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	25	25	25	25	25	25
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.41	0.41	0.41	0.41	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.13	0.31	0.04	0.33	0.08	0.29	0.11	0.10	0.21	0.05
s, saturation flow rate [veh/h]	832	1858	847	1828	1004	1900	1572	869	1900	1563
c, Capacity [veh/h]	225	815	243	802	345	776	642	239	776	638
d1, Uniform Delay [s]	26.43	13.79	22.91	14.11	19.60	14.85	11.79	24.99	13.29	11.06
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.07	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.50	5.27	1.28	6.32	0.12	0.85	0.08	0.37	0.19	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

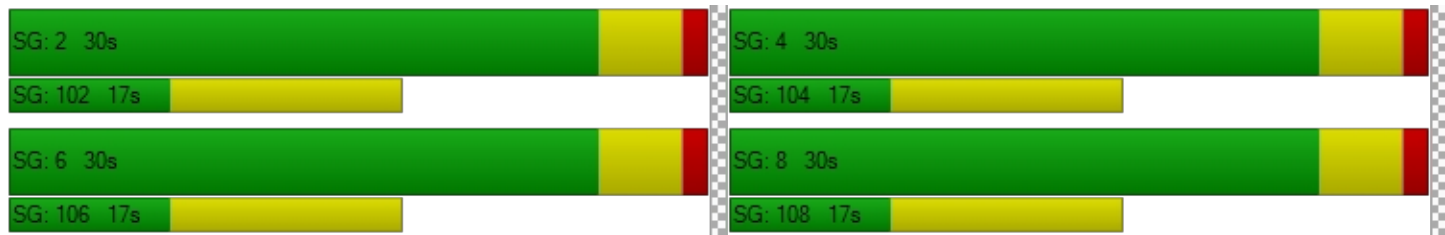
X, volume / capacity	0.49	0.71	0.15	0.75	0.23	0.71	0.26	0.38	0.51	0.12
d, Delay for Lane Group [s/veh]	33.93	19.06	24.19	20.43	19.73	15.69	11.87	25.35	13.48	11.09
Lane Group LOS	C	B	C	C	B	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	2.00	6.86	0.51	7.20	0.84	5.46	1.30	1.16	3.42	0.54
50th-Percentile Queue Length [ft]	49.88	171.57	12.85	179.90	21.10	136.55	32.40	28.98	85.41	13.46
95th-Percentile Queue Length [veh]	3.59	11.16	0.93	11.60	1.52	9.29	2.33	2.09	6.15	0.97
95th-Percentile Queue Length [ft]	89.78	278.97	23.13	289.88	37.97	232.37	58.32	52.16	153.74	24.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.93	19.06	19.06	24.19	20.43	20.43	19.73	15.69	11.87	25.35	13.48	11.09
Movement LOS	C	B	B	C	C	C	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.45			20.65			15.28			15.07		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.09											
Intersection LOS	B											
Intersection V/C	0.619											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.649

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	86	914	61	77	868	109	66	479	64	143	442	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	86	914	61	77	868	109	66	479	64	143	442	72
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	247	17	21	240	30	17	124	17	39	119	19
Total Analysis Volume [veh/h]	93	989	66	85	962	121	68	497	66	154	476	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	64	53	53	64	53	53	47	33	33	47	36	36
g / C, Green / Cycle	0.54	0.44	0.44	0.54	0.44	0.44	0.39	0.28	0.28	0.39	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.13	0.28	0.28	0.12	0.29	0.30	0.06	0.26	0.04	0.14	0.25	0.05
s, saturation flow rate [veh/h]	715	1900	1839	726	1900	1772	1101	1900	1514	1134	1900	1518
c, Capacity [veh/h]	345	839	813	357	838	781	296	524	418	295	563	450
d1, Uniform Delay [s]	17.94	25.96	26.08	17.17	26.40	26.75	26.99	42.58	32.87	29.25	39.60	31.29
k, delay calibration	0.50	0.50	0.50	0.31	0.50	0.50	0.04	0.24	0.04	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.92	3.65	3.88	0.99	4.04	4.73	0.14	17.44	0.06	0.53	5.82	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

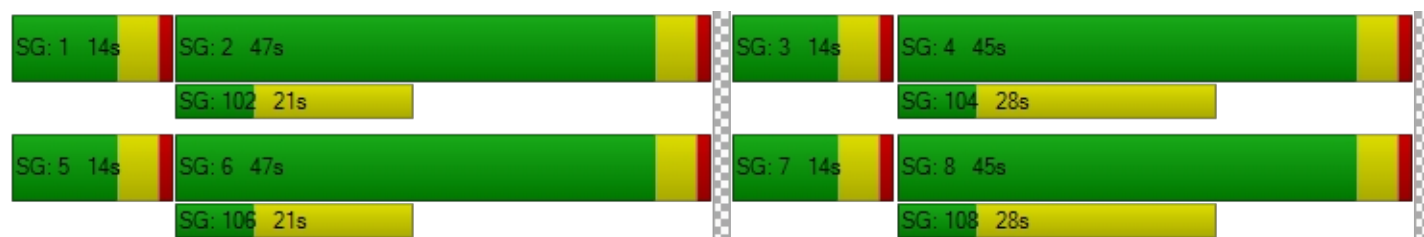
X, volume / capacity	0.27	0.64	0.64	0.24	0.66	0.68	0.23	0.95	0.16	0.52	0.85	0.17
d, Delay for Lane Group [s/veh]	19.86	29.61	29.96	18.16	30.43	31.49	27.14	60.02	32.94	29.78	45.42	31.35
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.40	12.32	12.16	1.20	13.00	12.79	1.23	16.68	1.46	2.95	13.82	1.68
50th-Percentile Queue Length [ft]	34.90	308.11	303.91	30.02	324.95	319.86	30.84	417.01	36.44	73.85	345.38	41.98
95th-Percentile Queue Length [veh]	2.51	18.08	17.87	2.16	18.91	18.66	2.22	23.38	2.62	5.32	19.91	3.02
95th-Percentile Queue Length [ft]	62.82	452.05	446.86	54.04	472.76	466.52	55.51	584.47	65.58	132.93	497.77	75.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.86	29.77	29.96	18.16	30.88	31.49	27.14	60.02	32.94	29.78	45.42	31.35
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	28.98			30.02			53.65			40.47		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.80											
Intersection LOS	D											
Intersection V/C	0.649											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	22	223	73	11	105	34	39	555	36	37	518	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	223	73	11	105	34	39	555	36	37	518	32
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	62	20	4	34	11	10	140	9	10	145	9
Total Analysis Volume [veh/h]	25	250	82	14	134	44	39	560	36	41	579	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	85	85	85	85
g / C, Green / Cycle	0.22	0.22	0.71	0.71	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.20	0.12	0.05	0.32	0.05	0.33
s, saturation flow rate [veh/h]	1778	1642	820	1874	834	1875
c, Capacity [veh/h]	418	388	507	1324	520	1325
d1, Uniform Delay [s]	45.84	41.10	13.00	7.57	12.66	7.68
k, delay calibration	0.21	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.41	0.98	0.30	1.11	0.30	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

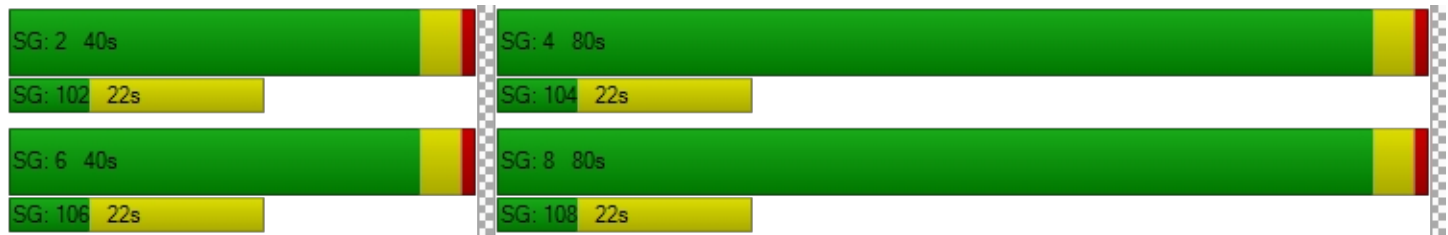
X, volume / capacity	0.85	0.49	0.08	0.45	0.08	0.46
d, Delay for Lane Group [s/veh]	55.25	42.08	13.29	8.68	12.96	8.85
Lane Group LOS	E	D	B	A	B	A
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	11.33	5.04	0.53	6.25	0.55	6.54
50th-Percentile Queue Length [ft]	283.31	125.91	13.36	156.13	13.82	163.61
95th-Percentile Queue Length [veh]	16.85	8.72	0.96	10.34	1.00	10.74
95th-Percentile Queue Length [ft]	421.34	217.92	24.06	258.59	24.88	268.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.25	55.25	55.25	42.08	42.08	42.08	13.29	8.68	8.68	12.96	8.85	8.85
Movement LOS	E	E	E	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	55.25			42.08			8.96			9.11		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	21.45											
Intersection LOS	C											
Intersection V/C	0.529											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	83	845	45	63	897	87	57	451	83	140	406	69
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	845	45	63	897	87	57	451	83	140	406	69
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	234	12	17	236	23	15	118	22	39	113	19
Total Analysis Volume [veh/h]	92	934	50	66	946	92	60	473	87	156	452	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	56	56	65	56	56	45	32	32	45	36	36
g / C, Green / Cycle	0.55	0.47	0.47	0.55	0.47	0.47	0.38	0.26	0.26	0.38	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.13	0.26	0.26	0.09	0.28	0.28	0.06	0.25	0.06	0.13	0.24	0.05
s, saturation flow rate [veh/h]	695	1900	1857	715	1900	1822	1086	1900	1520	1160	1900	1493
c, Capacity [veh/h]	352	892	872	368	887	850	290	502	401	300	575	452
d1, Uniform Delay [s]	16.31	22.84	22.88	15.39	23.59	23.69	27.11	43.24	34.45	29.65	38.26	30.74
k, delay calibration	0.50	0.50	0.50	0.16	0.50	0.50	0.04	0.24	0.04	0.04	0.15	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.80	2.50	2.59	0.34	2.92	3.13	0.13	17.32	0.10	0.52	3.37	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

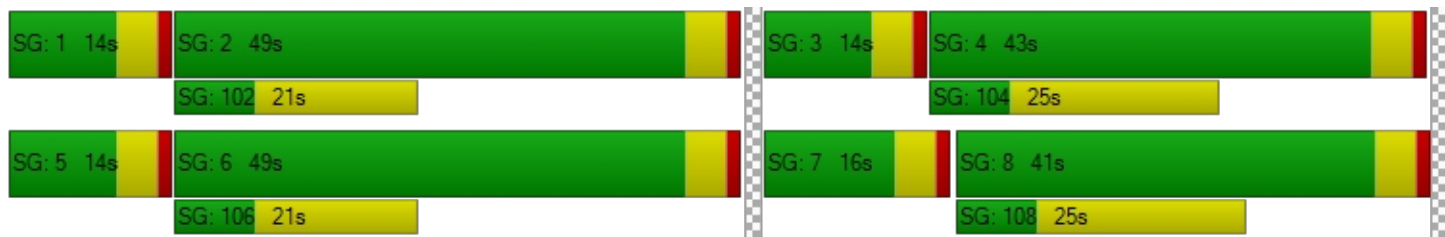
X, volume / capacity	0.26	0.56	0.56	0.18	0.59	0.60	0.21	0.94	0.22	0.52	0.79	0.17
d, Delay for Lane Group [s/veh]	18.11	25.34	25.47	15.73	26.51	26.83	27.24	60.57	34.55	30.17	41.63	30.81
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.36	10.55	10.40	0.87	11.57	11.31	1.10	15.89	1.99	3.05	12.46	1.64
50th-Percentile Queue Length [ft]	34.11	263.83	260.11	21.87	289.18	282.64	27.60	397.36	49.66	76.28	311.62	41.02
95th-Percentile Queue Length [veh]	2.46	15.88	15.69	1.57	17.15	16.82	1.99	22.43	3.58	5.49	18.25	2.95
95th-Percentile Queue Length [ft]	61.40	397.03	392.36	39.36	428.63	420.50	49.67	560.81	89.39	137.31	456.37	73.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.11	25.40	25.47	15.73	26.65	26.83	27.24	60.57	34.55	30.17	41.63	30.81
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	24.78			26.01			53.69			37.80		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.87											
Intersection LOS	C											
Intersection V/C	0.618											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	70	438	135	10	213	27	36	488	82	25	439	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	438	135	10	213	27	36	488	82	25	439	64
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	121	37	3	58	7	10	129	22	7	128	19
Total Analysis Volume [veh/h]	78	485	149	11	232	29	38	515	87	29	512	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.07	0.28	0.11	0.01	0.14	0.02	0.05	0.30	0.07	0.04	0.30	0.06
s, saturation flow rate [veh/h]	1044	1710	1380	829	1710	1416	804	1710	1314	805	1710	1280
c, Capacity [veh/h]	502	845	682	318	845	700	171	640	492	169	640	479
d1, Uniform Delay [s]	14.44	12.49	10.03	19.44	10.36	9.14	30.81	19.61	14.68	30.60	19.56	14.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.04	0.09	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	2.83	0.74	0.20	0.80	0.11	0.24	2.05	0.06	0.18	1.93	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

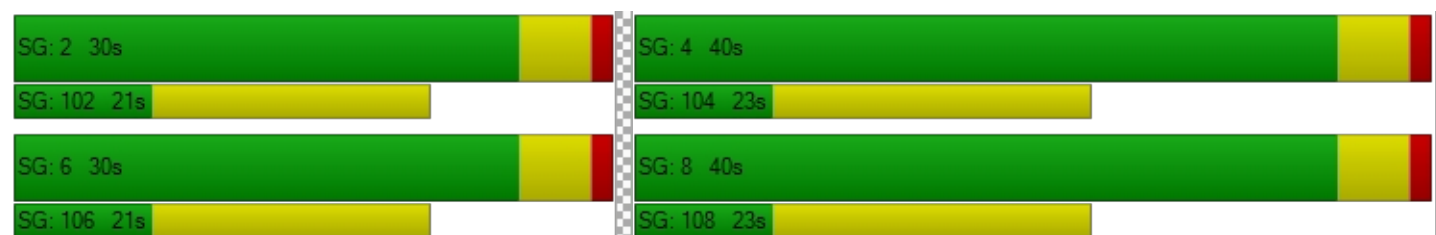
X, volume / capacity	0.16	0.57	0.22	0.03	0.27	0.04	0.22	0.80	0.18	0.17	0.80	0.16
d, Delay for Lane Group [s/veh]	15.10	15.32	10.77	19.64	11.16	9.25	31.05	21.66	14.74	30.77	21.49	14.61
Lane Group LOS	B	B	B	B	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.84	5.21	1.26	0.14	1.99	0.22	0.60	7.05	0.85	0.45	6.97	0.73
50th-Percentile Queue Length [ft]	21.03	130.14	31.50	3.59	49.74	5.51	14.95	176.20	21.34	11.30	174.27	18.25
95th-Percentile Queue Length [veh]	1.51	8.95	2.27	0.26	3.58	0.40	1.08	11.40	1.54	0.81	11.30	1.31
95th-Percentile Queue Length [ft]	37.86	223.68	56.70	6.46	89.53	9.91	26.92	285.05	38.41	20.34	282.52	32.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.10	15.32	10.77	19.64	11.16	9.25	31.05	21.66	14.74	30.77	21.49	14.61
Movement LOS	B	B	B	B	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	14.34			11.30			21.28			21.09		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.81											
Intersection LOS	B											
Intersection V/C	0.585											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	111	510	86	67	466	129	24	358	114	169	455	57
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	111	510	86	67	466	129	24	358	114	169	455	57
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	141	24	18	124	34	7	97	31	49	131	16
Total Analysis Volume [veh/h]	122	563	95	71	496	137	26	390	124	195	524	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	44	44	32	32	32	3	22	22	10	29	29
g / C, Green / Cycle	0.08	0.49	0.49	0.35	0.35	0.35	0.04	0.24	0.24	0.12	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.06	0.08	0.17	0.18	0.01	0.21	0.08	0.11	0.16	0.16
s, saturation flow rate [veh/h]	1810	1900	1544	857	1900	1703	1810	1900	1461	1810	1900	1793
c, Capacity [veh/h]	154	930	756	175	671	602	69	459	353	209	606	572
d1, Uniform Delay [s]	40.44	16.68	12.51	38.81	22.77	22.96	42.29	32.63	28.34	39.50	24.84	24.93
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.10	0.04	0.09	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.42	2.92	0.34	6.82	2.53	3.04	1.24	4.07	0.22	14.02	0.23	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

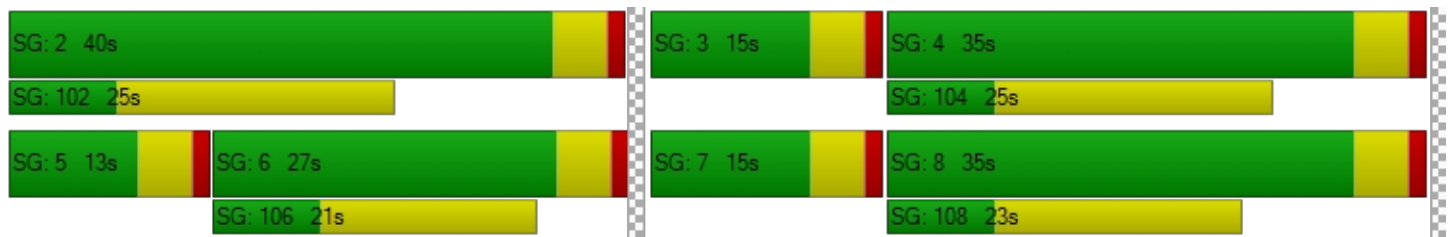
X, volume / capacity	0.79	0.61	0.13	0.41	0.49	0.51	0.37	0.85	0.35	0.93	0.50	0.51
d, Delay for Lane Group [s/veh]	43.86	19.60	12.85	45.63	25.30	26.00	43.53	36.70	28.56	53.51	25.07	25.19
Lane Group LOS	D	B	B	D	C	C	D	D	C	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.76	8.66	1.07	1.83	5.73	5.45	0.58	8.42	2.20	4.97	5.01	4.85
50th-Percentile Queue Length [ft]	69.12	216.38	26.79	45.72	143.19	136.16	14.57	210.52	55.09	124.29	125.33	121.19
95th-Percentile Queue Length [veh]	4.98	13.48	1.93	3.29	9.65	9.27	1.05	13.18	3.97	8.63	8.69	8.46
95th-Percentile Queue Length [ft]	124.41	337.00	48.22	82.30	241.32	231.84	26.23	329.50	99.17	215.70	217.13	211.46

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.86	19.60	12.85	45.63	25.54	26.00	43.53	36.70	28.56	53.51	25.12	25.19
Movement LOS	D	B	B	D	C	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	22.57			27.65			35.16			32.18		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	28.95											
Intersection LOS	C											
Intersection V/C	0.609											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	38	294	40	311	0	320	0	765	91	25	554	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	294	40	311	0	320	0	765	91	25	554	0
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	1.0000	0.9224	0.9224	0.8935	0.8935	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	96	13	85	0	87	0	207	25	7	155	0
Total Analysis Volume [veh/h]	50	386	52	339	0	349	0	829	99	28	620	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			173			0		
Bicycle Volume [bicycles/h]	32			6			28			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	30	0	30	0	48	0	48	0	12	60	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	20	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	29	29	14	49	51	51	7	63
g / C, Green / Cycle	0.05	0.24	0.24	0.11	0.41	0.43	0.43	0.06	0.53
(v / s)_j Volume / Saturation Flow Rate	0.03	0.12	0.13	0.10	0.12	0.24	0.26	0.02	0.17
s, saturation flow rate [veh/h]	1810	1900	1678	3514	2815	1900	1802	1810	3618
c, Capacity [veh/h]	87	462	408	404	1154	811	770	111	1905
d1, Uniform Delay [s]	55.94	38.92	39.43	52.01	23.85	26.06	26.53	53.71	16.23
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.15	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.24	0.29	0.40	1.81	0.05	2.92	3.48	1.68	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.58	0.48	0.53	0.84	0.30	0.57	0.60	0.25	0.33
d, Delay for Lane Group [s/veh]	58.18	39.21	39.83	53.82	23.90	28.98	30.02	55.39	16.68
Lane Group LOS	E	D	D	D	C	C	C	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.54	5.66	5.57	5.10	3.35	10.19	10.45	0.90	5.45
50th-Percentile Queue Length [ft]	38.46	141.61	139.22	127.41	83.80	254.72	261.17	22.45	136.16
95th-Percentile Queue Length [veh]	2.77	9.57	9.44	8.80	6.03	15.42	15.75	1.62	9.27
95th-Percentile Queue Length [ft]	69.22	239.19	235.97	219.97	150.84	385.60	393.69	40.42	231.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.18	39.47	39.83	53.82	0.00	23.90	0.00	29.44	30.02	55.39	16.68	0.00
Movement LOS	E	D	D	D		C		C	C	E	B	
d_A, Approach Delay [s/veh]	41.43			38.64			29.50			18.35		
Approach LOS	D			D			C			B		
d_I, Intersection Delay [s/veh]	31.28											
Intersection LOS	C											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	25	1092	54	68	1148	36	49	98	44	39	65	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	1092	54	68	1148	36	49	98	44	39	65	18
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	293	14	18	296	9	15	29	13	14	23	6
Total Analysis Volume [veh/h]	27	1171	58	70	1185	37	58	117	53	56	94	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.06	0.33	0.33	0.15	0.32	0.33	0.14	0.12
s, saturation flow rate [veh/h]	463	1900	1863	461	1900	1870	1597	1450
c, Capacity [veh/h]	320	1287	1262	318	1287	1267	388	361
d1, Uniform Delay [s]	10.74	6.18	6.19	12.00	6.15	6.17	29.07	28.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	1.29	1.33	1.59	1.27	1.30	0.53	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

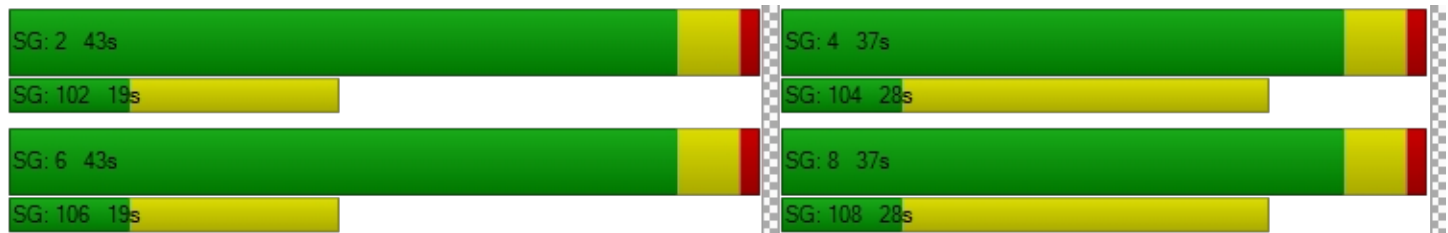
X, volume / capacity	0.08	0.48	0.48	0.22	0.48	0.48	0.59	0.49
d, Delay for Lane Group [s/veh]	11.25	7.47	7.52	13.58	7.42	7.48	29.59	28.39
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.28	4.21	4.16	0.81	4.15	4.13	3.90	2.90
50th-Percentile Queue Length [ft]	6.94	105.16	104.03	20.25	103.79	103.32	97.48	72.47
95th-Percentile Queue Length [veh]	0.50	7.57	7.49	1.46	7.47	7.44	7.02	5.22
95th-Percentile Queue Length [ft]	12.49	189.25	187.25	36.45	186.83	185.98	175.47	130.44

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.25	7.49	7.52	13.58	7.45	7.48	29.59	29.59	29.59	28.39	28.39	28.39
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.57			7.78			29.59			28.39		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.61											
Intersection LOS	B											
Intersection V/C	0.470											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	42	1188	37	26	938	38	25	115	48	56	133	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	1188	37	26	938	38	25	115	48	56	133	36
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	313	10	7	243	10	8	35	15	15	37	10
Total Analysis Volume [veh/h]	44	1253	39	27	974	39	30	139	58	62	147	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.08	0.34	0.34	0.06	0.27	0.27	0.14	0.16
s, saturation flow rate [veh/h]	563	1900	1874	433	1900	1865	1669	1510
c, Capacity [veh/h]	379	1256	1239	290	1256	1233	425	394
d1, Uniform Delay [s]	10.31	6.97	6.99	12.38	6.28	6.29	27.61	28.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	1.52	1.56	0.64	0.98	1.00	0.39	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

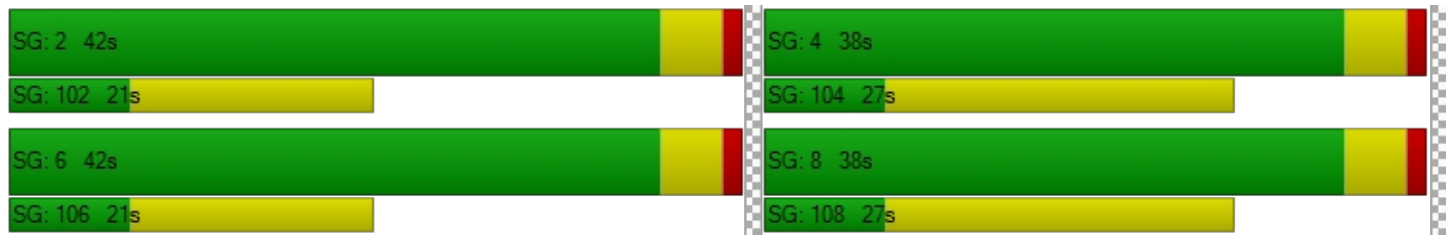
X, volume / capacity	0.12	0.52	0.52	0.09	0.41	0.41	0.53	0.63
d, Delay for Lane Group [s/veh]	10.94	8.50	8.55	13.02	7.25	7.29	28.00	29.19
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.45	5.13	5.11	0.31	3.59	3.56	3.72	4.29
50th-Percentile Queue Length [ft]	11.15	128.30	127.67	7.84	89.86	88.99	92.93	107.14
95th-Percentile Queue Length [veh]	0.80	8.85	8.81	0.56	6.47	6.41	6.69	7.68
95th-Percentile Queue Length [ft]	20.07	221.18	220.32	14.11	161.74	160.19	167.27	192.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.94	8.52	8.55	13.02	7.27	7.29	28.00	28.00	28.00	29.19	29.19	29.19
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.60			7.42			28.00			29.19		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.51											
Intersection LOS	B											
Intersection V/C	0.508											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	74	906	60	60	1116	107	38	176	41	81	132	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	906	60	60	1116	107	38	176	41	81	132	52
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	267	18	15	284	27	10	48	11	23	38	15
Total Analysis Volume [veh/h]	87	1070	71	61	1138	109	41	190	44	93	151	60
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	22	22	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.28	0.28	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.19	0.30	0.31	0.12	0.33	0.34	0.19	0.03	0.19	0.04
s, saturation flow rate [veh/h]	453	1900	1848	500	1900	1827	1192	1529	1300	1566
c, Capacity [veh/h]	265	1150	1119	296	1150	1106	386	427	426	438
d1, Uniform Delay [s]	18.63	8.94	8.96	15.71	9.33	9.39	24.08	21.36	25.54	21.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.29	1.56	1.63	1.57	1.89	2.02	0.55	0.04	0.45	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

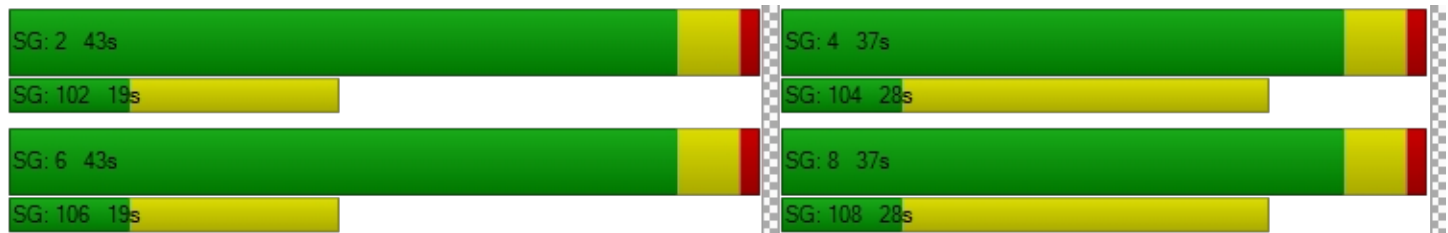
X, volume / capacity	0.33	0.50	0.50	0.21	0.55	0.56	0.60	0.10	0.57	0.14
d, Delay for Lane Group [s/veh]	21.92	10.50	10.59	17.28	11.22	11.41	24.64	21.40	26.00	21.63
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.37	5.16	5.09	0.82	5.94	5.85	3.46	0.59	3.93	0.81
50th-Percentile Queue Length [ft]	34.32	129.04	127.21	20.45	148.54	146.16	86.39	14.74	98.32	20.30
95th-Percentile Queue Length [veh]	2.47	8.89	8.79	1.47	9.94	9.81	6.22	1.06	7.08	1.46
95th-Percentile Queue Length [ft]	61.77	222.19	219.69	36.81	248.48	245.30	155.50	26.53	176.98	36.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.92	10.54	10.59	17.28	11.30	11.41	24.64	24.64	21.40	26.00	26.00	21.63
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.35			11.59			24.12			25.14		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.92											
Intersection LOS	B											
Intersection V/C	0.530											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	940	90	94	1283	240	119
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	940	90	94	1283	240	119
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	279	27	26	357	66	33
Total Analysis Volume [veh/h]	1117	107	105	1427	265	131
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	64	64	64	64	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.33	0.34	0.23	0.40	0.15	0.08
s, saturation flow rate [veh/h]	1863	1789	454	3547	1728	1560
c, Capacity [veh/h]	1336	1283	325	2544	312	281
d1, Uniform Delay [s]	5.35	5.46	12.34	6.01	35.64	32.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	1.27	2.61	0.90	6.46	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

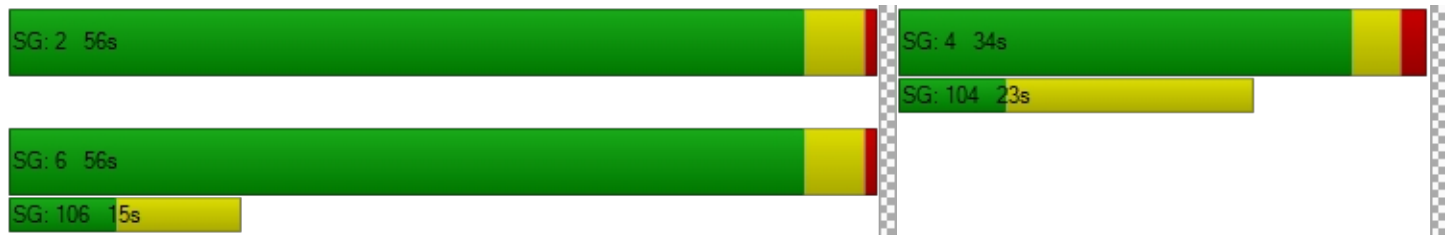
X, volume / capacity	0.46	0.48	0.32	0.56	0.85	0.47
d, Delay for Lane Group [s/veh]	6.48	6.73	14.95	6.91	42.10	34.14
Lane Group LOS	A	A	B	A	D	C
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.03	4.13	1.41	5.31	5.99	2.58
50th-Percentile Queue Length [ft]	100.67	103.36	35.24	132.80	149.77	64.39
95th-Percentile Queue Length [veh]	7.25	7.44	2.54	9.09	10.01	4.64
95th-Percentile Queue Length [ft]	181.21	186.05	63.44	227.30	250.13	115.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.60	6.73	14.95	6.91	42.10	34.14
Movement LOS	A	A	B	A	D	C
d_A, Approach Delay [s/veh]	6.61		7.46		39.46	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.15					
Intersection LOS	B					
Intersection V/C	0.556					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	19	858	46	38	868	60	78	361	65	37	264	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	858	46	38	868	60	78	361	65	37	264	41
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	239	13	10	220	15	20	94	17	11	78	12
Total Analysis Volume [veh/h]	21	956	51	39	881	61	81	375	68	44	312	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	29	22	22
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.03	0.27	0.27	0.07	0.25	0.25	0.33	0.25
s, saturation flow rate [veh/h]	604	1900	1855	568	1900	1842	1606	1610
c, Capacity [veh/h]	285	912	891	267	912	884	658	656
d1, Uniform Delay [s]	16.37	11.05	11.08	17.68	10.81	10.84	17.61	15.42
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.27	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	2.45	2.54	1.15	2.14	2.24	5.48	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

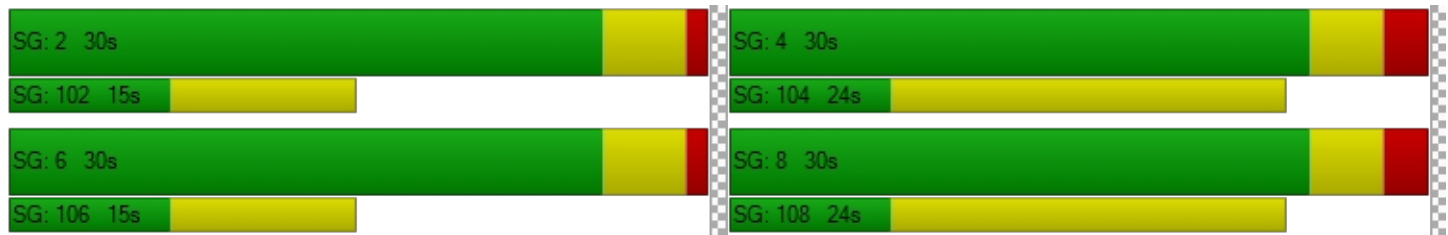
X, volume / capacity	0.07	0.56	0.56	0.15	0.52	0.53	0.80	0.62
d, Delay for Lane Group [s/veh]	16.87	13.50	13.62	18.83	12.94	13.08	23.10	16.67
Lane Group LOS	B	B	B	B	B	B	C	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.24	4.62	4.57	0.48	4.21	4.15	6.81	4.07
50th-Percentile Queue Length [ft]	6.00	115.57	114.22	12.03	105.27	103.68	170.37	101.85
95th-Percentile Queue Length [veh]	0.43	8.15	8.07	0.87	7.58	7.47	11.10	7.33
95th-Percentile Queue Length [ft]	10.80	203.72	201.86	21.66	189.41	186.63	277.40	183.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.87	13.56	13.62	18.83	13.01	13.08	23.10	23.10	23.10	16.67	16.67	16.67
Movement LOS	B	B	B	B	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.63			13.24			23.10			16.67		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	15.61											
Intersection LOS	B											
Intersection V/C	0.595											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	38	485	127	42	108	32	71	441	152	46	285	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	485	127	42	108	32	71	441	152	46	285	35
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	124	32	14	35	10	19	116	40	12	77	9
Total Analysis Volume [veh/h]	39	495	130	54	140	41	75	465	160	50	308	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.03	0.35	0.07	0.08	0.03	0.41	0.27
s, saturation flow rate [veh/h]	1260	1772	797	1863	1529	1724	1469
c, Capacity [veh/h]	551	749	177	787	646	798	691
d1, Uniform Delay [s]	13.43	15.49	27.81	10.84	10.30	16.52	12.66
k, delay calibration	0.11	0.23	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	5.14	0.97	0.11	0.04	13.02	3.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

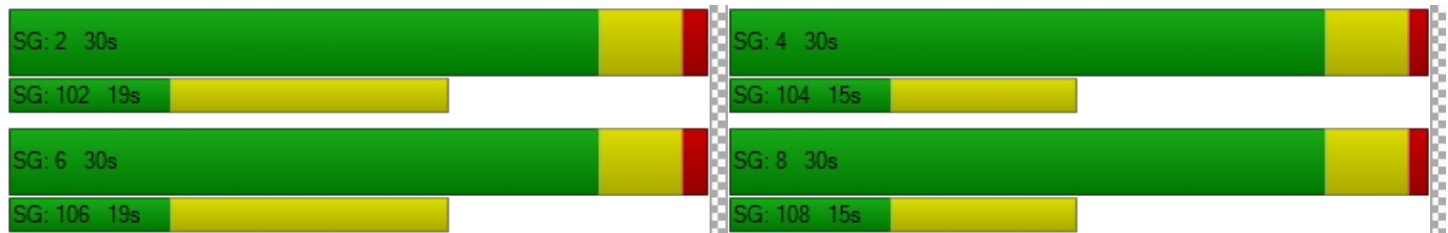
X, volume / capacity	0.07	0.83	0.31	0.18	0.06	0.88	0.57
d, Delay for Lane Group [s/veh]	13.48	20.64	28.77	10.95	10.34	29.53	16.10
Lane Group LOS	B	C	C	B	B	C	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	7.36	0.78	1.04	0.29	10.45	3.93
50th-Percentile Queue Length [ft]	8.11	184.10	19.45	26.11	7.29	261.13	98.31
95th-Percentile Queue Length [veh]	0.58	11.81	1.40	1.88	0.52	15.75	7.08
95th-Percentile Queue Length [ft]	14.61	295.36	35.00	47.00	13.12	393.64	176.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.48	20.64	20.64	28.77	10.95	10.34	29.53	29.53	29.53	16.10	16.10	16.10
Movement LOS	B	C	C	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	20.22			14.94			29.53			16.10		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	22.05											
Intersection LOS	C											
Intersection V/C	0.759											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	558	0	81	4	6	6	3	1300	586	92	988	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	558	0	81	4	6	6	3	1300	586	92	988	10
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	0	24	2	3	3	1	367	166	25	267	3
Total Analysis Volume [veh/h]	674	0	98	7	11	11	3	1470	663	100	1070	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	5	69	69	105	69	69	69
g / C, Green / Cycle	0.26	0.26	0.04	0.58	0.58	0.88	0.58	0.58	0.58
(v / s)_j Volume / Saturation Flow Rate	0.22	0.22	0.02	0.01	0.28	0.41	0.27	0.20	0.20
s, saturation flow rate [veh/h]	1810	1720	1726	520	5176	1615	366	3618	1889
c, Capacity [veh/h]	474	451	77	296	2991	1413	203	2091	1092
d1, Uniform Delay [s]	41.69	41.81	55.59	17.92	14.90	1.59	30.61	13.28	13.28
k, delay calibration	0.15	0.15	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.07	5.76	2.98	0.06	0.58	1.12	8.31	0.44	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

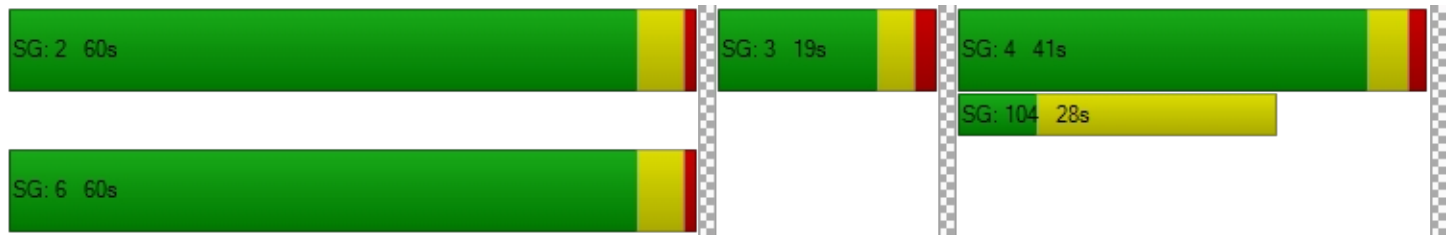
X, volume / capacity	0.83	0.84	0.37	0.01	0.49	0.47	0.49	0.34	0.34
d, Delay for Lane Group [s/veh]	46.76	47.57	58.57	17.98	15.48	2.71	38.92	13.72	14.13
Lane Group LOS	D	D	E	B	B	A	D	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	11.58	11.23	0.92	0.05	7.66	1.61	2.83	4.97	5.32
50th-Percentile Queue Length [ft]	289.45	280.77	22.94	1.26	191.47	40.37	70.85	124.18	132.88
95th-Percentile Queue Length [veh]	17.16	16.73	1.65	0.09	12.20	2.91	5.10	8.62	9.10
95th-Percentile Queue Length [ft]	428.96	418.17	41.29	2.27	304.94	72.67	127.53	215.56	227.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.10	47.57	47.57	58.57	58.57	58.57	17.98	15.48	2.71	38.92	13.86	14.13
Movement LOS	D	D	D	E	E	E	B	B	A	D	B	B
d_A, Approach Delay [s/veh]	47.16			58.57			11.52			15.98		
Approach LOS	D			E			B			B		
d_I, Intersection Delay [s/veh]	19.81											
Intersection LOS	B											
Intersection V/C	0.521											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	21.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.826

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	21	294	127	14	167	29	29	162	21	12	113	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	294	127	14	167	29	29	162	21	12	113	18
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	84	36	4	52	9	9	50	6	4	36	6
Total Analysis Volume [veh/h]	24	338	146	18	210	36	36	199	26	15	142	23
Pedestrian Volume [ped/h]	10			5			6			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	615	560	536	519
Degree of Utilization, x	0.83	0.47	0.49	0.35

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	8.66	2.51	2.64	1.54
95th-Percentile Queue Length [ft]	216.45	62.69	66.06	38.40
Approach Delay [s/veh]	30.65	15.04	15.92	13.57
Approach LOS	D	C	C	B
Intersection Delay [s/veh]	21.54			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	19	553	622	37	39	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	553	622	37	39	16
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	154	162	10	12	5
Total Analysis Volume [veh/h]	21	615	649	39	48	20
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	22	22	22	22	22
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	11	11	11	3
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.11
(v / s)_j Volume / Saturation Flow Rate	0.03	0.32	0.34	0.02	0.04
s, saturation flow rate [veh/h]	791	1900	1900	1588	1748
c, Capacity [veh/h]	423	901	901	753	202
d1, Uniform Delay [s]	8.75	4.58	4.71	3.18	9.13
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.34	0.41	0.01	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.68	0.72	0.05	0.34
d, Delay for Lane Group [s/veh]	8.77	4.93	5.12	3.19	9.49
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.42	0.47	0.02	0.22
50th-Percentile Queue Length [ft]	1.41	10.52	11.64	0.42	5.58
95th-Percentile Queue Length [veh]	0.10	0.76	0.84	0.03	0.40
95th-Percentile Queue Length [ft]	2.54	18.93	20.96	0.76	10.04

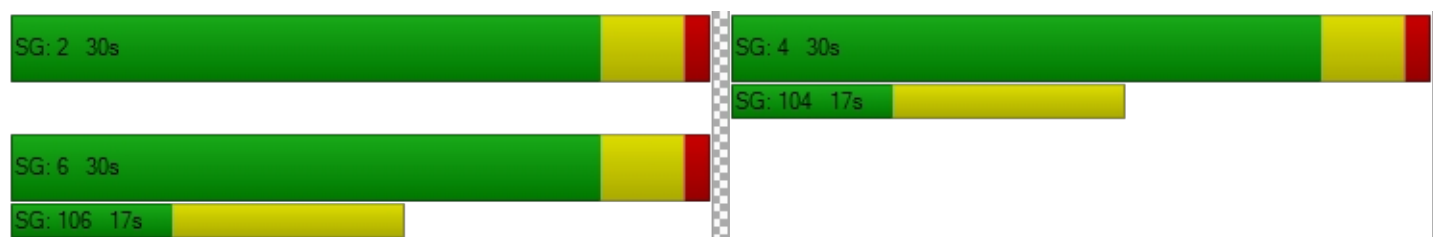


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.77	4.93	5.12	3.19	9.49	9.49
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.05		5.01		9.49	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.25					
Intersection LOS	A					
Intersection V/C	0.380					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	65	1393	0	0	1330	646	684	0	112
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	65	1393	0	0	1330	646	684	0	112
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	17	356	0	0	364	177	209	0	34
Total Analysis Volume [veh/h]	0	0	0	66	1423	0	0	1456	707	834	0	137
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	4	0
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	25	0
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No		
Maximum Recall					No			No	No		No		
Pedestrian Recall					No			No	No		No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		53	53	53	53	53	85	28	28
g / C, Green / Cycle		0.59	0.59	0.59	0.59	0.59	0.95	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate		0.18	0.37	0.37	0.00	0.40	0.44	0.24	0.09
s, saturation flow rate [veh/h]		371	1900	1900	375	3618	1615	3514	1583
c, Capacity [veh/h]		183	1114	1114	195	2121	1525	1094	493
d1, Uniform Delay [s]		28.59	12.28	12.28	0.00	12.85	0.25	27.89	23.29
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.47	2.81	2.81	0.00	1.84	1.02	1.13	0.30
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.36	0.64	0.64	0.00	0.69	0.46	0.76	0.28
d, Delay for Lane Group [s/veh]		34.07	15.09	15.09	0.00	14.69	1.26	29.02	23.59
Lane Group LOS		C	B	B	A	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.60	10.87	10.87	0.00	9.34	0.43	7.86	2.15
50th-Percentile Queue Length [ft]		40.10	271.75	271.75	0.00	233.52	10.76	196.58	53.78
95th-Percentile Queue Length [veh]		2.89	16.28	16.28	0.00	14.35	0.77	12.46	3.87
95th-Percentile Queue Length [ft]		72.18	406.93	406.93	0.00	358.83	19.37	311.55	96.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	34.07	15.09	15.09	0.00	14.69	1.26	29.02	23.59	23.59
Movement LOS				C	B	B	A	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			15.93			10.30			28.26		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	15.88											
Intersection LOS	B											
Intersection V/C	0.640											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	49.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.811

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	352	259	409	0	263	674	0	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	352	259	409	0	263	674	0	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	92	68	107	0	68	177	0	18
Total Analysis Volume [veh/h]	0	0	0	0	369	271	426	0	274	707	0	73
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.20	0.17	0.24	0.14	0.37	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		36.29	15.41	35.31	4.60	22.23	14.62
k, delay calibration		0.24	0.25	0.45	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		47.96	0.68	70.55	0.35	9.86	0.29
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		1.05	0.36	1.09	0.20	0.84	0.10
d, Delay for Lane Group [s/veh]		84.25	16.09	105.86	4.95	32.10	14.91
Lane Group LOS		F	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		12.37	3.70	15.96	1.57	14.73	0.90
50th-Percentile Queue Length [ft]		309.34	92.48	398.99	39.31	368.34	22.51
95th-Percentile Queue Length [veh]		18.63	6.66	23.61	2.83	21.03	1.62
95th-Percentile Queue Length [ft]		465.79	166.47	590.17	70.75	525.72	40.53



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	84.25	16.09	105.86	0.00	4.95	32.10	0.00	14.91
Movement LOS					F	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			55.39			66.36			30.49		
Approach LOS	A			E			E			C		
d_I, Intersection Delay [s/veh]	49.85											
Intersection LOS	D											
Intersection V/C	0.811											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	220	276	314	53	41	10	50	995	61	0	741	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	220	276	314	53	41	10	50	995	61	0	741	44
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	76	87	15	11	3	14	275	17	0	215	13
Total Analysis Volume [veh/h]	243	305	347	59	46	11	55	1101	68	0	860	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	54	54	54	54	54
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.60	0.60	0.60	0.60	0.60
(v / s)_j Volume / Saturation Flow Rate	0.21	0.18	0.26	0.06	0.04	0.10	0.24	0.25	0.27	0.28
s, saturation flow rate [veh/h]	1173	1676	1342	948	1605	548	3192	1610	1676	1634
c, Capacity [veh/h]	396	507	406	219	485	294	1900	958	998	973
d1, Uniform Delay [s]	30.27	26.77	29.54	34.97	22.71	18.53	9.73	9.77	10.12	10.22
k, delay calibration	0.11	0.11	0.14	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.54	1.15	6.85	0.66	0.11	1.40	0.65	1.31	1.50	1.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.60	0.86	0.27	0.12	0.19	0.41	0.41	0.46	0.47
d, Delay for Lane Group [s/veh]	31.82	27.92	36.39	35.62	22.81	19.93	10.38	11.08	11.63	11.84
Lane Group LOS	C	C	D	D	C	B	B	B	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.89	5.60	7.60	1.20	0.88	0.87	3.86	4.12	4.93	4.99
50th-Percentile Queue Length [ft]	122.24	139.95	189.92	30.07	21.90	21.67	96.38	103.02	123.15	124.75
95th-Percentile Queue Length [veh]	8.52	9.48	12.12	2.16	1.58	1.56	6.94	7.42	8.57	8.65
95th-Percentile Queue Length [ft]	212.89	236.96	302.92	54.12	39.42	39.01	173.48	185.44	214.14	216.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.82	27.92	36.39	35.62	22.81	22.81	19.93	10.59	11.08	0.00	11.72	11.84
Movement LOS	C	C	D	D	C	C	B	B	B		B	B
d_A, Approach Delay [s/veh]	32.26			29.33			11.03			11.73		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.95											
Intersection LOS	B											
Intersection V/C	0.537											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	149	503	82	99	1201	123	143	671	56	81	518	74
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	149	503	82	99	1201	123	143	671	56	81	518	74
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	133	22	30	361	37	41	194	16	23	146	21
Total Analysis Volume [veh/h]	158	532	87	119	1445	148	166	777	65	91	585	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	47	38	38	47	37	37	34	25	25	34	22	22
g / C, Green / Cycle	0.52	0.43	0.43	0.52	0.41	0.41	0.37	0.28	0.28	0.37	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.26	0.15	0.06	0.12	0.41	0.09	0.16	0.22	0.23	0.10	0.18	0.19
s, saturation flow rate [veh/h]	608	3547	1559	1029	3547	1563	1059	1900	1814	874	1900	1758
c, Capacity [veh/h]	288	1503	661	603	1461	644	386	528	504	307	462	427
d1, Uniform Delay [s]	19.85	17.60	15.84	11.61	26.29	17.21	21.39	30.30	30.48	21.25	31.48	31.73
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.20	0.21	0.11	0.11	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.33	0.65	0.41	0.73	21.05	0.83	3.47	5.39	6.46	0.53	2.35	3.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.55	0.35	0.13	0.20	0.99	0.23	0.43	0.81	0.82	0.30	0.74	0.77
d, Delay for Lane Group [s/veh]	27.18	18.25	16.25	12.34	47.34	18.04	24.86	35.70	36.94	21.78	33.83	34.94
Lane Group LOS	C	B	B	B	D	B	C	D	D	C	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.17	3.74	1.14	1.27	18.67	2.08	2.69	9.02	8.96	1.28	6.99	6.85
50th-Percentile Queue Length [ft]	54.26	93.39	28.38	31.84	466.71	51.98	67.30	225.58	224.02	32.06	174.78	171.14
95th-Percentile Queue Length [veh]	3.91	6.72	2.04	2.29	25.75	3.74	4.85	13.95	13.87	2.31	11.33	11.14
95th-Percentile Queue Length [ft]	97.67	168.09	51.09	57.31	643.86	93.57	121.14	348.74	346.75	57.70	283.19	278.41

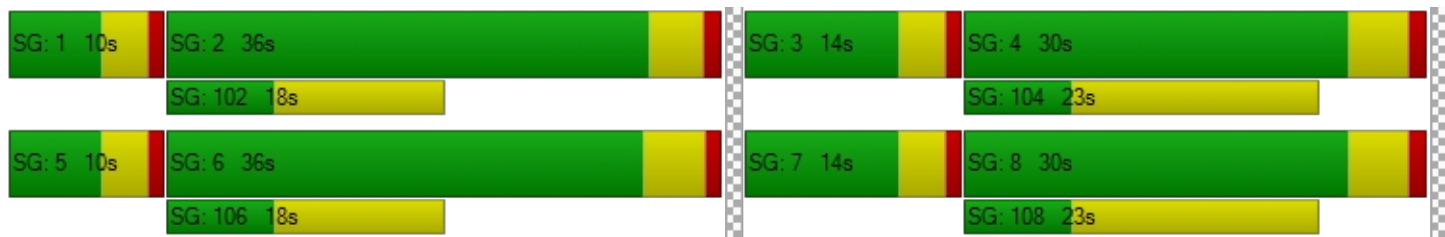


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.18	18.25	16.25	12.34	47.34	18.04	24.86	36.26	36.94	21.78	34.29	34.94
Movement LOS	C	B	B	B	D	B	C	D	D	C	C	C
d_A, Approach Delay [s/veh]	19.84			42.38			34.42			32.86		
Approach LOS	B			D			C			C		
d_I, Intersection Delay [s/veh]	34.68											
Intersection LOS	C											
Intersection V/C	0.723											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	106	740	122	0	719	71	133	951	107	85	775	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	740	122	0	719	71	133	951	107	85	775	77
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	209	35	0	200	20	36	257	29	27	251	25
Total Analysis Volume [veh/h]	120	838	138	0	802	79	144	1028	116	110	1002	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	46	46	46	46	46	46
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.51	0.51	0.51	0.51	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.19	0.27	0.27	0.17	0.17	0.28	0.28	0.08	0.20	0.29	0.30
s, saturation flow rate [veh/h]	631	1863	1749	3547	1729	518	3618	1506	546	1900	1814
c, Capacity [veh/h]	231	717	674	1366	666	225	1854	772	241	974	930
d1, Uniform Delay [s]	32.19	23.25	23.37	20.39	20.49	32.30	14.93	11.58	28.04	15.15	15.25
k, delay calibration	0.11	0.16	0.17	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.81	1.83	2.11	0.21	0.46	13.12	1.20	0.41	6.13	2.46	2.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.52	0.70	0.71	0.43	0.44	0.64	0.55	0.15	0.46	0.57	0.58
d, Delay for Lane Group [s/veh]	34.00	25.08	25.49	20.60	20.95	45.42	16.13	11.99	34.17	17.61	17.93
Lane Group LOS	C	C	C	C	C	D	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.51	8.92	8.58	4.44	4.51	3.83	6.97	1.25	2.41	7.84	7.70
50th-Percentile Queue Length [ft]	62.80	222.89	214.48	111.11	112.78	95.74	174.22	31.35	60.18	195.94	192.47
95th-Percentile Queue Length [veh]	4.52	13.81	13.38	7.90	7.99	6.89	11.30	2.26	4.33	12.43	12.25
95th-Percentile Queue Length [ft]	113.05	345.31	334.57	197.55	199.87	172.33	282.46	56.43	108.33	310.72	306.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.00	25.24	25.49	0.00	20.70	20.95	45.42	16.13	11.99	34.17	17.75	17.93
Movement LOS	C	C	C		C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	26.23			20.72			19.04			19.26		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	21.19											
Intersection LOS	C											
Intersection V/C	0.571											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	47.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	202	766	507	360	944	334	43	914	132	127	727	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	202	766	507	360	944	334	43	914	132	127	727	53
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	218	144	97	254	90	11	240	35	37	213	16
Total Analysis Volume [veh/h]	230	870	576	387	1014	359	45	960	139	149	853	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	40	57	12	40	57	12	35	54	12	37	37
g / C, Green / Cycle	0.10	0.33	0.48	0.10	0.33	0.48	0.10	0.29	0.45	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.37	0.11	0.20	0.24	0.02	0.27	0.10	0.08	0.24	0.04
s, saturation flow rate [veh/h]	1810	5074	1564	3445	5074	1505	1810	3618	1449	1774	3618	1495
c, Capacity [veh/h]	187	1694	752	357	1694	723	187	1065	656	184	1107	457
d1, Uniform Delay [s]	53.93	32.21	25.67	53.93	33.35	21.30	49.57	40.78	19.93	52.77	37.92	30.23
k, delay calibration	0.40	0.50	0.50	0.11	0.50	0.50	0.11	0.20	0.23	0.17	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	133.69	1.12	7.32	48.88	1.57	2.43	0.65	5.55	0.34	12.20	2.47	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.23	0.51	0.77	1.08	0.60	0.50	0.24	0.90	0.21	0.81	0.77	0.14
d, Delay for Lane Group [s/veh]	187.62	33.33	33.00	102.80	34.92	23.73	50.23	46.33	20.27	64.97	40.39	30.52
Lane Group LOS	F	C	C	F	C	C	D	D	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	12.57	6.87	14.49	7.80	8.42	7.30	1.27	14.18	2.39	4.98	11.57	1.33
50th-Percentile Queue Length [ft]	314.18	171.66	362.36	195.12	210.43	182.47	31.79	354.48	59.81	124.61	289.31	33.34
95th-Percentile Queue Length [veh]	19.85	11.16	20.74	12.77	13.18	11.73	2.29	20.35	4.31	8.65	17.15	2.40
95th-Percentile Queue Length [ft]	496.18	279.09	518.45	319.35	329.38	293.24	57.21	508.87	107.65	216.14	428.78	60.01



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	187.62	33.33	33.00	102.80	34.92	23.73	50.23	46.33	20.27	64.97	40.39	30.52
Movement LOS	F	C	C	F	C	C	D	D	C	E	D	C
d_A, Approach Delay [s/veh]	54.39			47.56			43.32			43.25		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	47.92											
Intersection LOS	D											
Intersection V/C	0.784											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	630	390	608	1048
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	630	390	608	1048
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	175	109	161	278
Total Analysis Volume [veh/h]	0	0	702	434	645	1111
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.22	0.31	0.40	0.35
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	11.25	12.65	29.72	0.19
k, delay calibration	0.50	0.50	0.26	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	2.72	95.15	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.55	1.19	0.37
d, Delay for Lane Group [s/veh]	11.91	15.37	124.87	0.53
Lane Group LOS	B	B	F	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.82	5.69	25.34	0.14
50th-Percentile Queue Length [ft]	95.58	142.15	633.50	3.62
95th-Percentile Queue Length [veh]	6.88	9.60	37.38	0.26
95th-Percentile Queue Length [ft]	172.04	239.91	934.55	6.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	11.91	15.37	124.87	0.53
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		13.23		46.20	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	33.25					
Intersection LOS	C					
Intersection V/C	0.710					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	38	464	48	103	1044	100	86	372	188	107	462	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	464	48	103	1044	100	86	372	188	107	462	88
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	137	14	28	287	28	23	98	49	29	126	24
Total Analysis Volume [veh/h]	45	547	57	113	1149	110	91	392	198	117	503	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	37	0	15	52	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	37	37	51	51	51	30	30	30	30	30	30
g / C, Green / Cycle	0.41	0.41	0.41	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.10	0.17	0.04	0.12	0.36	0.08	0.13	0.12	0.14	0.13	0.18	0.18
s, saturation flow rate [veh/h]	438	3192	1407	967	3192	1406	717	3192	1403	868	1676	1577
c, Capacity [veh/h]	140	1297	572	564	1795	791	198	1072	471	273	563	530
d1, Uniform Delay [s]	37.50	19.19	16.58	10.48	13.51	9.38	36.06	22.69	23.18	31.49	24.37	24.42
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.02	1.01	0.35	0.80	1.77	0.37	1.66	0.21	0.60	1.06	0.83	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.32	0.42	0.10	0.20	0.64	0.14	0.46	0.37	0.42	0.43	0.55	0.55
d, Delay for Lane Group [s/veh]	43.52	20.20	16.92	11.28	15.27	9.75	37.72	22.90	23.77	32.56	25.20	25.32
Lane Group LOS	D	C	B	B	B	A	D	C	C	C	C	C
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.17	4.13	0.77	1.13	7.68	1.04	1.97	3.10	3.25	2.32	5.31	5.05
50th-Percentile Queue Length [ft]	29.32	103.29	19.16	28.32	192.00	26.08	49.30	77.61	81.22	58.08	132.66	126.32
95th-Percentile Queue Length [veh]	2.11	7.44	1.38	2.04	12.23	1.88	3.55	5.59	5.85	4.18	9.08	8.74
95th-Percentile Queue Length [ft]	52.77	185.92	34.48	50.98	305.63	46.95	88.74	139.70	146.20	104.55	227.10	218.48



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.52	20.20	16.92	11.28	15.27	9.75	37.72	22.90	23.77	32.56	25.25	25.32
Movement LOS	D	C	B	B	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	21.53			14.50			25.13			26.45		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	20.46											
Intersection LOS	C											
Intersection V/C	0.545											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	58	795	199	103	819	99	51	303	50	69	369	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	795	199	103	819	99	51	303	50	69	369	21
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	220	55	26	210	25	16	93	15	19	104	6
Total Analysis Volume [veh/h]	64	880	220	106	841	102	63	372	61	78	415	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	61	61	61	61	61	61	39	39	39	39	39
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.12	0.23	0.24	0.23	0.20	0.20	0.07	0.22	0.04	0.09	0.26
s, saturation flow rate [veh/h]	533	3192	1498	459	3192	1577	852	1676	1406	906	1659
c, Capacity [veh/h]	301	1780	835	256	1780	879	147	602	505	196	595
d1, Uniform Delay [s]	19.47	14.05	14.10	24.40	13.41	13.44	48.58	29.06	23.64	44.03	30.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	0.73	1.58	4.86	0.55	1.13	0.73	0.41	0.04	0.48	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

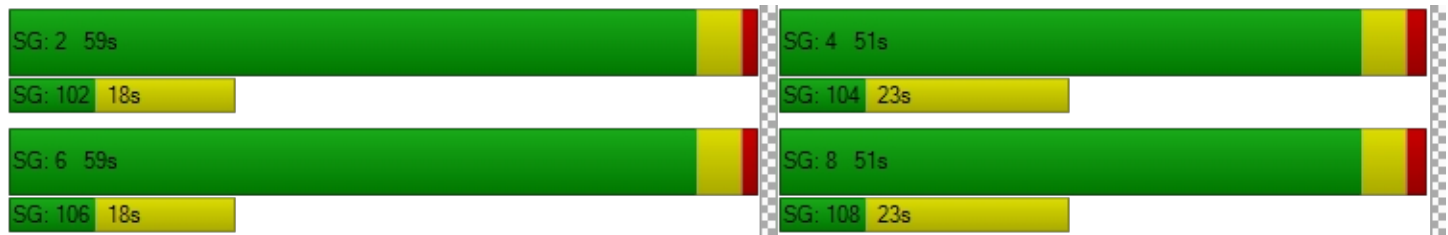
X, volume / capacity	0.21	0.42	0.42	0.41	0.35	0.36	0.43	0.62	0.12	0.40	0.74
d, Delay for Lane Group [s/veh]	21.07	14.77	15.68	29.26	13.96	14.57	49.32	29.47	23.68	44.52	32.93
Lane Group LOS	C	B	B	C	B	B	D	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.16	5.34	5.29	2.41	4.29	4.43	1.72	8.07	1.07	2.01	10.35
50th-Percentile Queue Length [ft]	29.08	133.55	132.32	60.13	107.36	110.86	42.89	201.66	26.81	50.32	258.72
95th-Percentile Queue Length [veh]	2.09	9.13	9.07	4.33	7.69	7.89	3.09	12.72	1.93	3.62	15.62
95th-Percentile Queue Length [ft]	52.35	228.31	226.64	108.23	192.32	197.20	77.19	318.11	48.26	90.58	390.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.07	14.91	15.68	29.26	14.11	14.57	49.32	29.47	23.68	44.52	32.93	32.93
Movement LOS	C	B	B	C	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	15.40			15.69			31.28			34.68		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.02											
Intersection LOS	C											
Intersection V/C	0.501											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	111.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	144	942	667	237	434	28	277	763	333	35	1167	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	144	942	667	237	434	28	277	763	333	35	1167	49
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	241	171	66	120	8	75	207	90	9	307	13
Total Analysis Volume [veh/h]	148	965	683	263	482	31	300	827	361	37	1228	52
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	64	47	58	64	53	53	49	42	42	49	37	47
g / C, Green / Cycle	0.53	0.39	0.48	0.53	0.44	0.44	0.41	0.35	0.35	0.41	0.31	0.39
(v / s)_j Volume / Saturation Flow Rate	0.14	0.34	0.55	0.34	0.14	0.14	0.46	0.36	0.38	0.06	0.43	0.03
s, saturation flow rate [veh/h]	1031	2800	1253	774	1863	1822	659	1500	1714	620	2856	1575
c, Capacity [veh/h]	552	1087	609	305	815	797	211	522	596	182	888	626
d1, Uniform Delay [s]	15.75	34.32	31.49	26.13	22.06	22.07	49.81	39.18	39.18	29.38	41.39	22.54
k, delay calibration	0.31	0.11	0.50	0.26	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	2.69	74.56	15.52	0.22	0.23	214.32	51.27	60.40	2.51	179.18	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.27	0.89	1.12	0.86	0.32	0.32	1.42	1.04	1.08	0.20	1.38	0.08
d, Delay for Lane Group [s/veh]	16.50	37.01	106.05	41.65	22.29	22.30	264.13	90.45	99.58	31.89	220.56	22.80
Lane Group LOS	B	D	F	D	C	C	F	F	F	C	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.20	13.14	29.26	5.58	4.83	4.73	16.66	22.13	26.80	0.76	34.90	0.96
50th-Percentile Queue Length [ft]	54.98	328.60	731.51	139.39	120.65	118.27	416.59	553.37	669.97	18.95	872.48	23.95
95th-Percentile Queue Length [veh]	3.96	19.09	41.48	9.45	8.43	8.30	28.13	30.73	37.18	1.36	53.17	1.72
95th-Percentile Queue Length [ft]	98.96	477.24	1036.88	236.21	210.72	207.44	703.28	768.35	929.60	34.10	1329.20	43.12



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.50	37.01	106.05	41.65	22.29	22.30	264.13	93.57	99.58	31.89	220.56	22.80
Movement LOS	B	D	F	D	C	C	F	F	F	C	F	C
d_A, Approach Delay [s/veh]	61.58			28.85			129.42			207.45		
Approach LOS	E			C			F			F		
d_I, Intersection Delay [s/veh]	111.36											
Intersection LOS	F											
Intersection V/C	0.667											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	44	260	61	41	96	36	24	839	39	81	773	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	260	61	41	96	36	24	839	39	81	773	21
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	72	17	12	29	11	6	223	10	25	239	7
Total Analysis Volume [veh/h]	49	288	68	49	115	43	26	893	42	100	958	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	55	55	55	55
g / C, Green / Cycle	0.28	0.28	0.61	0.61	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.27	0.21	0.32	0.32	0.44	0.44
s, saturation flow rate [veh/h]	1498	985	1516	1497	939	1512
c, Capacity [veh/h]	469	328	974	920	627	930
d1, Uniform Delay [s]	31.53	27.12	9.42	9.81	13.70	11.96
k, delay calibration	0.30	0.17	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.18	3.12	1.80	2.10	5.46	4.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.63	0.50	0.52	0.66	0.72
d, Delay for Lane Group [s/veh]	43.70	30.24	11.23	11.91	19.16	16.74
Lane Group LOS	D	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.93	4.00	4.92	5.13	6.87	9.07
50th-Percentile Queue Length [ft]	248.30	99.92	123.00	128.34	171.63	226.66
95th-Percentile Queue Length [veh]	15.10	7.19	8.56	8.85	11.16	14.00
95th-Percentile Queue Length [ft]	377.52	179.86	213.94	221.24	279.06	350.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.70	43.70	43.70	30.24	30.24	30.24	11.23	11.56	11.91	19.16	17.53	16.74
Movement LOS	D	D	D	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	43.70			30.24			11.57			17.66		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	20.41											
Intersection LOS	C											
Intersection V/C	0.713											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.129

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	577	509	0	16	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	577	509	0	16	38
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	166	146	0	6	13
Total Analysis Volume [veh/h]	0	664	586	0	23	53
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.13	0.11
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	28.11	13.47
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.43	0.37
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	10.84	9.29
d_A, Approach Delay [s/veh]	0.00		0.00		17.90	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.03					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	537	549	0	26	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	537	549	0	26	37
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	151	156	0	9	12
Total Analysis Volume [veh/h]	0	604	624	0	35	49
Pedestrian Volume [ped/h]	10		2		21	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.72	0.40	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	19.50	8.83	0.00	0.00	0.00
Movement LOS		C	A		A	A
95th-Percentile Queue Length [veh]	0.00	6.34	1.96	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	158.61	49.12	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.50		8.83		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	13.18					
Intersection LOS	C					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	42	442	5	2	224	11	0	0	0	17	1	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	442	5	2	224	11	0	0	0	17	1	33
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	140	2	1	63	3	0	0	0	6	0	11
Total Analysis Volume [veh/h]	53	560	6	2	253	12	0	0	0	23	1	44
Pedestrian Volume [ped/h]	35			23			5			6		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	815	761	598	651
Degree of Utilization, x	0.76	0.35	0.00	0.10

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	7.30	1.58	0.00	0.35
95th-Percentile Queue Length [ft]	182.43	39.55	0.00	8.70
Approach Delay [s/veh]	19.92	10.27	0.00	9.17
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	16.45			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	19	424	1	0	201	11	2	1	6	17	0	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	424	1	0	201	11	2	1	6	17	0	23
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	122	0	0	64	4	1	0	3	6	0	8
Total Analysis Volume [veh/h]	22	489	1	0	258	14	4	2	11	24	0	32
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	814	779	665	665
Degree of Utilization, x	0.63	0.35	0.03	0.08

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	4.53	1.57	0.08	0.27
95th-Percentile Queue Length [ft]	113.32	39.30	1.97	6.87
Approach Delay [s/veh]	14.59	10.09	8.56	8.91
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	12.67			
Intersection LOS	B			



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** San Vicente Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	78	1	78	91	1	91
	↵↔ Left-Through		0			0	
	→ Through	181	1	181	355	1	355
	↘ Through-Right		0			0	
	↘ Right	108	1	36	168	1	99
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	219	1	219	179	1	179
	↵↔ Left-Through		0			0	
	→ Through	282	1	282	264	1	264
	↘ Through-Right		0			0	
	↘ Right	153	1	121	95	1	36
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	65	1	65	119	1	119
	↵↔ Left-Through		0			0	
	→ Through	734	2	367	696	2	348
	↘ Through-Right		0			0	
	↘ Right	71	1	32	73	1	28
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	144	1	144	138	1	138
	↵↔ Left-Through		0			0	
	→ Through	765	2	383	688	2	344
	↘ Through-Right		0			0	
	↘ Right	146	1	37	258	1	169
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 463			<i>North-South:</i> 619
				<i>East-West:</i> 511			<i>East-West:</i> 486
				<b>SUM:</b> 974			<b>SUM:</b> 1105
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.708			0.804
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.608</b>			<b>0.704</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 2	WB-- 2	2	EB-- 2	WB-- 2	2
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	40	0	40	38	0	38
	↵↔ Left-Through		1			1	
	→ Through	113	0	153	176	0	214
	↘ Through-Right		0			0	
	↘ Right	17	1	6	41	1	11
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	182	0	182	81	0	81
	↵↔ Left-Through		1			1	
	→ Through	97	0	279	132	0	213
	↘ Through-Right		0			0	
	↘ Right	28	1	8	52	1	15
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	74	1	74
	↵↔ Left-Through		0			0	
	→ Through	1050	1	542	906	1	483
	↘ Through-Right		1			1	
	↘ Right	34	0	34	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	23	1	23	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1236	1	670	1116	1	612
	↘ Through-Right		1			1	
	↘ Right	103	0	103	107	0	107
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 335			<i>North-South:</i> 295
				<i>East-West:</i> 710			<i>East-West:</i> 686
				<b>SUM:</b> 1045			<b>SUM:</b> 981
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.697			0.654
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.597</b>			<b>0.554</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	168	1	168	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	86	1	86	119	1	119
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1251	1	681	940	1	515
	↵↔ Through-Right		1			1	
	↵ Right	111	0	111	90	0	90
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	94	1	94
	↵↔ Left-Through		0			0	
	→ Through	1453	2	727	1283	2	642
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 168			<i>North-South:</i> 240
				<i>East-West:</i> 751			<i>East-West:</i> 642
				<b>SUM:</b> 919			<b>SUM:</b> 882
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.613			0.588
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.513</b>			<b>0.488</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	107	0	107	78	0	78
	↵↘ Left-Through		0			0	
	→ Through	267	0	424	361	0	504
	↘ Through-Right		0			0	
	↘ Right	50	0	0	65	0	0
	↘↵ Left-Through-Right			1		1	
	↘↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	63	0	63	37	0	37
	↵↘ Left-Through		0			0	
	→ Through	173	0	238	264	0	342
	↘ Through-Right		0			0	
	↘ Right	2	0	0	41	0	0
	↘↵ Left-Through-Right			1		1	
	↘↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	47	1	47	19	1	19
	↵↘ Left-Through		0			0	
	→ Through	828	1	450	858	1	452
	↘ Through-Right		1			1	
	↘ Right	71	0	71	46	0	46
	↘↵ Left-Through-Right			0		0	
	↘↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	75	1	75	38	1	38
	↵↘ Left-Through		0			0	
	→ Through	1342	1	697	868	1	464
	↘ Through-Right		1			1	
	↘ Right	51	0	51	60	0	60
	↘↵ Left-Through-Right			0		0	
	↘↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 487			<i>North-South:</i> 541
				<i>East-West:</i> 744			<i>East-West:</i> 490
				<b>SUM:</b> 1231			<b>SUM:</b> 1031
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.821			0.687
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.721</b>			<b>0.587</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Broadway  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	114	0	114	71	0	71
	↵↔ Left-Through		0			0	
	→ Through	356	0	511	441	0	664
	↘ Through-Right		0			0	
	↘ Right	41	0	0	152	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	9	0	9	46	0	46
	↵↔ Left-Through		0			0	
	→ Through	292	0	335	285	0	366
	↘ Through-Right		0			0	
	↘ Right	34	0	0	35	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	16	1	16	38	1	38
	↵↔ Left-Through		0			0	
	→ Through	131	0	228	485	0	612
	↘ Through-Right		1			1	
	↘ Right	97	0	0	127	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	53	1	53	42	1	42
	↵↔ Left-Through		0			0	
	→ Through	174	1	174	108	1	108
	↘ Through-Right		0			0	
	↘ Right	27	1	27	32	1	32
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 520			<i>North-South:</i> 710
				<i>East-West:</i> 281			<i>East-West:</i> 654
				<i>SUM:</i> 801			<i>SUM:</i> 1364
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.534			0.909
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.434</b>			<b>0.809</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	525	2	289	684	2	376
	↵↔ Left-Through		0			0	
	→ Through	0	0	50	0	0	112
	↵↔ Through-Right		1			1	
	↵ Right	50	0	0	112	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	43	1	43	65	1	65
	↵↔ Left-Through		0			0	
	→ Through	876	1	438	1393	1	697
	↵↔ Through-Right		1			1	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↔ Left-Through		0			0	
	→ Through	1653	2	827	1330	2	665
	↵↔ Through-Right		0			0	
	↵ Right	719	1	430	646	1	270
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 289			<i>North-South:</i> 376
				<i>East-West:</i> 870			<i>East-West:</i> 730
				<i>SUM:</i> 1159			<i>SUM:</i> 1106
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.773			0.737
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.673</b>			<b>0.637</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	707	1	425	558	1	320
	↵↔ Left-Through		0			0	
	→ Through	3	0	425	0	0	320
	↘ Through-Right		0			0	
	↘ Right	139	0	0	81	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	3	0	3	4	0	4
	↵↔ Left-Through		0			0	
	→ Through	2	0	12	6	0	16
	↘ Through-Right		0			0	
	↘ Right	7	0	0	6	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	10	1	10	3	1	3
	↵↔ Left-Through		0			0	
	→ Through	761	3	254	1300	3	433
	↘ Through-Right		0			0	
	↘ Right	347	1	0	586	1	266
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	144	1	144	92	1	92
	↵↔ Left-Through		0			0	
	→ Through	1356	2	456	988	2	333
	↘ Through-Right		1			1	
	↘ Right	12	0	12	10	0	10
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 437			<i>North-South:</i> 336
				<i>East-West:</i> 466			<i>East-West:</i> 525
				<i>SUM:</i> 903			<i>SUM:</i> 861
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.634			0.604
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.534</b>			<b>0.504</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 2	2	NB-- 2	SB-- 2	2
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	393	1	393	409	1	409
	↵↔ Left-Through		0			0	
	→ Through	453	1	453	263	1	263
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	337	1	337	674	1	674
	↘ Through-Right		0			0	
	↘ Right	140	1	140	70	1	70
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	520	1	520	352	1	352
	↵↔ Left-Through		0			0	
	→ Through	4	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	352	1	0	259	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	1	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	5	0	0	1	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 730			<i>North-South:</i> 1083
				<i>East-West:</i> 520			<i>East-West:</i> 352
				<i>SUM:</i> 1250			<i>SUM:</i> 1435
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.877			1.007
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.777</b>			<b>0.907</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>E</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Texas Ave  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	65	0	65	24	0	24
	Left-Through		1			1	
	Through	840	0	560	839	0	487
	Through-Right		1			1	
	Right	20	0	560	39	0	487
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	14	0	14	81	0	81
	Left-Through		1			1	
	Through	749	0	408	773	0	559
	Through-Right		1			1	
	Right	11	0	408	21	0	559
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	24	0	24	44	0	44
	Left-Through		0			0	
	Through	78	0	180	260	0	365
	Through-Right		0			0	
	Right	78	0	0	61	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	45	0	45	41	0	41
	Left-Through		0			0	
	Through	86	0	185	96	0	173
	Through-Right		0			0	
	Right	54	0	0	36	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 574 <i>East-West:</i> 225 <i>SUM:</i> 799			<i>North-South:</i> 583 <i>East-West:</i> 406 <i>SUM:</i> 989
VOLUME/CAPACITY (V/C) RATIO:				0.533			0.659
V/C LESS ATSAC/ATCS ADJUSTMENT:				<b>0.433</b>			<b>0.559</b>
LEVEL OF SERVICE (LOS):				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	212	1	212	143	1	143
	↵↔ Left-Through		0			0	
	→ Through	599	1	336	671	1	364
	↘ Through-Right		1			1	
	↘ Right	73	0	73	56	0	56
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	125	1	125	81	1	81
	↵↔ Left-Through		0			0	
	→ Through	521	1	297	518	1	296
	↘ Through-Right		1			1	
	↘ Right	72	0	72	74	0	74
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	91	1	91	149	1	149
	↵↔ Left-Through		0			0	
	→ Through	1019	2	510	503	2	252
	↘ Through-Right		0			0	
	↘ Right	103	1	0	82	1	11
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	86	1	86	99	1	99
	↵↔ Left-Through		0			0	
	→ Through	1194	2	597	1201	2	601
	↘ Through-Right		0			0	
	↘ Right	68	1	6	123	1	83
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 509			<i>North-South:</i> 445
				<i>East-West:</i> 688			<i>East-West:</i> 750
				<b>SUM:</b> 1197			<b>SUM:</b> 1195
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.871			0.869
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.771</b>			<b>0.769</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	141	1	141	133	1	133
	↵↵ Left-Through		0			0	
	→ Through	783	2	392	951	2	476
	↵↵↵ Through-Right		0			0	
	↵ Right	50	1	50	107	1	107
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	92	1	92	85	1	85
	↵↵ Left-Through		0			0	
	→ Through	803	1	433	775	1	426
	↵↵↵ Through-Right		1			1	
	↵ Right	63	0	63	77	0	77
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	33	1	33	106	1	106
	↵↵ Left-Through		0			0	
	→ Through	722	1	442	740	1	431
	↵↵↵ Through-Right		1			1	
	↵ Right	161	0	161	122	0	122
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	3	0	0
	↵↵ Left-Through		0			0	
	→ Through	1140	2	423	719	2	263
	↵↵↵ Through-Right		1			1	
	↵ Right	128	0	128	71	0	71
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 574			<i>North-South:</i> 561
				<i>East-West:</i> 456			<i>East-West:</i> 431
				<i>SUM:</i> 1030			<i>SUM:</i> 992
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.687			0.661
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.587</b>			<b>0.561</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers **Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	66	1	66	50	1	50
	Left-Through		0			0	
	Through	913	2	319	995	2	352
	Through-Right		1			1	
	Right	45	0	45	61	0	61
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	1	0	0	1	0	0
	Left-Through		0			0	
	Through	897	1	483	741	1	393
	Through-Right		1			1	
	Right	69	0	69	44	0	44
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	60	1	60	220	1	220
	Left-Through		0			0	
	Through	127	0	210	276	0	590
	Through-Right		1			1	
	Right	83	0	0	314	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	155	1	155	53	1	53
	Left-Through		0			0	
	Through	187	1	187	41	1	41
	Through-Right		0			0	
	Right	1	1	1	10	1	10
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		549	<i>North-South:</i>		443
		<i>East-West:</i>		365	<i>East-West:</i>		643
		<i>SUM:</i>		914	<i>SUM:</i>		1086
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.609			0.724
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.509			0.624
<b>LEVEL OF SERVICE (LOS):</b>				A			B



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 1	1	NB-- 3	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 3	3	EB-- 3	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	152	1	152	43	1	43
	↵↔ Left-Through		0			0	
	→ Through	936	2	468	914	2	457
	↘ Through-Right		0			0	
	↘ Right	153	1	50	132	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	273	1	273	127	1	127
	↵↔ Left-Through		0			0	
	→ Through	801	2	401	727	2	364
	↘ Through-Right		0			0	
	↘ Right	120	1	0	53	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	106	1	106	202	1	202
	↵↔ Left-Through		0			0	
	→ Through	741	3	247	766	3	255
	↘ Through-Right		0			0	
	↘ Right	94	1	0	507	1	464
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	187	2	103	360	2	198
	↵↔ Left-Through		0			0	
	→ Through	1179	3	393	944	3	315
	↘ Through-Right		0			0	
	↘ Right	292	1	19	334	1	207
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 741			<i>North-South:</i> 584
				<i>East-West:</i> 499			<i>East-West:</i> 662
				<b>SUM:</b> 1240			<b>SUM:</b> 1246
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.902			0.906
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.802</b>			<b>0.806</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Ocean Park Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	460	1	460	277	1	277
	↵↔ Left-Through		0			0	
	→ Through	1355	1	838	763	1	548
	↘ Through-Right		1			1	
	↘ Right	321	0	321	333	0	333
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	21	1	21	35	1	35
	↵↔ Left-Through		0			0	
	→ Through	690	2	345	1167	2	584
	↘ Through-Right		0			0	
	↘ Right	273	1	245	49	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	57	1	57	144	1	144
	↵↔ Left-Through		0			0	
	→ Through	391	2	196	942	2	471
	↘ Through-Right		0			0	
	↘ Right	282	1	52	667	1	529
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	154	1	154	237	1	237
	↵↔ Left-Through		0			0	
	→ Through	686	1	369	434	1	231
	↘ Through-Right		1			1	
	↘ Right	51	0	51	28	0	28
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		859	<i>North-South:</i>		861
		<i>East-West:</i>		426	<i>East-West:</i>		766
		<b>SUM:</b>		1285	<b>SUM:</b>		1627
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.935			1.183
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.835</b>			<b>1.083</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** I-10 EB On-Ramp  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
0				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	948	2	474	630	2	315
	↵↔ Through-Right		0			0	
	↵ Right	510	1	510	390	1	390
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	532	1	532	608	1	608
	↵↔ Left-Through		0			0	
	→ Through	989	2	495	1048	2	524
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		1042	<i>North-South:</i>		998
		<i>East-West:</i>		0	<i>East-West:</i>		0
		<b>SUM:</b>		1042	<b>SUM:</b>		998
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.695			0.665
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.595</b>			<b>0.565</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>

## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	101	1	101	86	1	86
	↵↔ Left-Through		0			0	
	→ Through	316	2	158	372	2	186
	↘ Through-Right		0			0	
	↘ Right	117	1	92	188	1	137
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	175	1	175	107	1	107
	↵↔ Left-Through		0			0	
	→ Through	291	1	180	462	1	275
	↘ Through-Right		1			1	
	↘ Right	69	0	69	88	0	88
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	72	1	72	38	1	38
	↵↔ Left-Through		0			0	
	→ Through	1259	2	630	464	2	232
	↘ Through-Right		0			0	
	↘ Right	31	1	0	48	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	51	1	51	103	1	103
	↵↔ Left-Through		0			0	
	→ Through	1312	2	656	1044	2	522
	↘ Through-Right		0			0	
	↘ Right	63	1	0	100	1	47
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 333			<i>North-South:</i> 361
				<i>East-West:</i> 728			<i>East-West:</i> 560
				<i>SUM:</i> 1061			<i>SUM:</i> 921
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.745			0.646
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.645</b>			<b>0.546</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Existing  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2017

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	115	1	115	51	1	51
	↵↔ Left-Through		0			0	
	→ Through	465	1	465	303	1	303
	↘ Through-Right		0			0	
	↘ Right	51	1	23	50	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	102	1	102	69	1	69
	↵↔ Left-Through		0			0	
	→ Through	444	0	522	369	0	390
	↘ Through-Right		1			1	
	↘ Right	78	0	0	21	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	38	1	38	58	1	58
	↵↔ Left-Through		0			0	
	→ Through	1082	2	395	795	2	331
	↘ Through-Right		1			1	
	↘ Right	103	0	103	199	0	199
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	57	1	57	103	1	103
	↵↔ Left-Through		0			0	
	→ Through	1417	2	495	819	2	306
	↘ Through-Right		1			1	
	↘ Right	67	0	67	99	0	99
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 637			<i>North-South:</i> 441
				<i>East-West:</i> 533			<i>East-West:</i> 434
				<i>SUM:</i> 1170			<i>SUM:</i> 875
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.780			0.583
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.680</b>			<b>0.483</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**APPROVAL YEAR (2019) NO PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	34.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	110	290	40	110	50	160	360	50	20	430	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	110	290	40	110	50	160	360	50	20	430	130
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	30	79	11	30	13	45	101	14	5	117	35
Total Analysis Volume [veh/h]	43	119	315	43	118	54	180	404	56	22	467	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	29	51	51	3	24	24
g / C, Green / Cycle	0.30	0.63	0.30	0.30	0.33	0.56	0.56	0.03	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.42	0.20	0.42	0.04	0.10	0.21	0.04	0.01	0.25	0.12
s, saturation flow rate [veh/h]	383	1538	380	1528	1810	1900	1499	1643	1900	1204
c, Capacity [veh/h]	167	970	166	463	593	1068	842	54	508	322
d1, Uniform Delay [s]	27.57	7.73	27.58	22.67	22.60	10.97	8.97	42.66	32.03	27.36
k, delay calibration	0.50	0.10	0.50	0.04	0.50	0.50	0.50	0.04	0.19	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	62.84	0.18	62.76	0.04	1.32	1.02	0.15	1.82	11.74	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

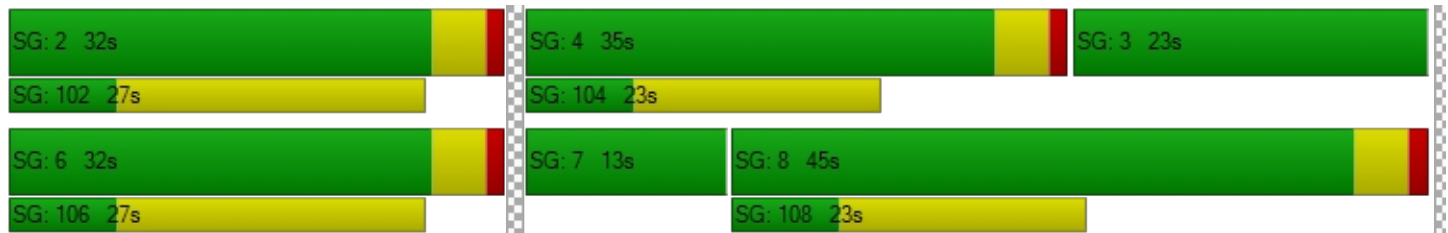
X, volume / capacity	0.97	0.32	0.97	0.12	0.30	0.38	0.07	0.41	0.92	0.44
d, Delay for Lane Group [s/veh]	90.41	7.90	90.34	22.71	23.91	11.99	9.12	44.48	43.77	27.71
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.52	2.65	5.40	0.81	3.00	4.45	0.51	0.50	11.21	2.50
50th-Percentile Queue Length [ft]	138.00	66.34	135.11	20.14	75.11	111.31	12.65	12.55	280.32	62.41
95th-Percentile Queue Length [veh]	9.37	4.78	9.22	1.45	5.41	7.91	0.91	0.90	16.70	4.49
95th-Percentile Queue Length [ft]	234.33	119.42	230.43	36.25	135.20	197.82	22.77	22.60	417.61	112.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	90.41	90.41	7.90	90.34	90.34	22.71	23.91	11.99	9.12	44.48	43.77	27.71
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	35.92			73.36			15.09			40.20		
Approach LOS	D			E			B			D		
d_I, Intersection Delay [s/veh]	34.60											
Intersection LOS	C											
Intersection V/C	0.808											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	650	120	200	630	20	150	310	220	70	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	650	120	200	630	20	150	310	220	70	360	40
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	171	32	51	161	5	40	83	59	19	97	11
Total Analysis Volume [veh/h]	21	685	126	204	643	20	160	332	235	75	388	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	45	45	45	36	36	36	24	24	24
g / C, Green / Cycle	0.36	0.36	0.36	0.50	0.50	0.50	0.40	0.40	0.40	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.03	0.19	0.08	0.20	0.18	0.01	0.13	0.17	0.15	0.07	0.11	0.12
s, saturation flow rate [veh/h]	782	3618	1488	1008	3618	1482	1201	1900	1544	1047	1900	1817
c, Capacity [veh/h]	264	1309	538	511	1805	740	500	758	616	198	508	486
d1, Uniform Delay [s]	27.06	22.63	20.04	14.04	13.75	11.46	18.42	19.72	19.19	38.21	27.30	27.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	1.50	1.02	2.31	0.55	0.07	0.70	0.15	0.14	0.45	0.21	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

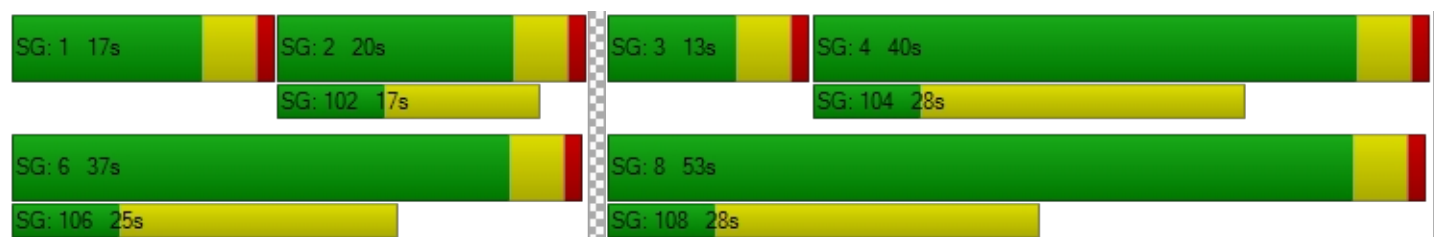
X, volume / capacity	0.08	0.52	0.23	0.40	0.36	0.03	0.32	0.44	0.38	0.38	0.43	0.44
d, Delay for Lane Group [s/veh]	27.65	24.13	21.06	16.35	14.30	11.53	19.12	19.87	19.34	38.66	27.52	27.60
Lane Group LOS	C	C	C	B	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.39	5.79	1.95	2.49	3.82	0.20	2.23	4.92	3.40	1.57	3.78	3.69
50th-Percentile Queue Length [ft]	9.84	144.87	48.79	62.30	95.42	5.12	55.80	123.10	84.90	39.16	94.58	92.31
95th-Percentile Queue Length [veh]	0.71	9.74	3.51	4.49	6.87	0.37	4.02	8.56	6.11	2.82	6.81	6.65
95th-Percentile Queue Length [ft]	17.71	243.56	87.82	112.15	171.76	9.21	100.44	214.08	152.81	70.48	170.24	166.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.65	24.13	21.06	16.35	14.30	11.53	19.12	19.87	19.34	38.66	27.55	27.60
Movement LOS	C	C	C	B	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	23.75			14.72			19.53			29.20		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	20.97											
Intersection LOS	C											
Intersection V/C	0.439											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	80	60	50	100	50	90	650	110	20	690	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	80	60	50	100	50	90	650	110	20	690	20
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	24	18	16	32	16	23	169	29	5	185	5
Total Analysis Volume [veh/h]	12	95	71	63	127	63	94	678	115	21	738	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	50	50	58	47	47
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.64	0.56	0.56	0.64	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.06	0.05	0.05	0.11	0.11	0.21	0.22	0.03	0.20	0.20
s, saturation flow rate [veh/h]	1829	1488	1243	1654	887	1900	1718	802	1900	1870
c, Capacity [veh/h]	512	380	318	423	598	1061	959	541	988	972
d1, Uniform Delay [s]	26.43	26.19	31.00	28.18	6.92	11.16	11.32	6.69	12.96	12.99
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.09	0.11	0.28	0.04	1.05	1.26	0.13	1.14	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

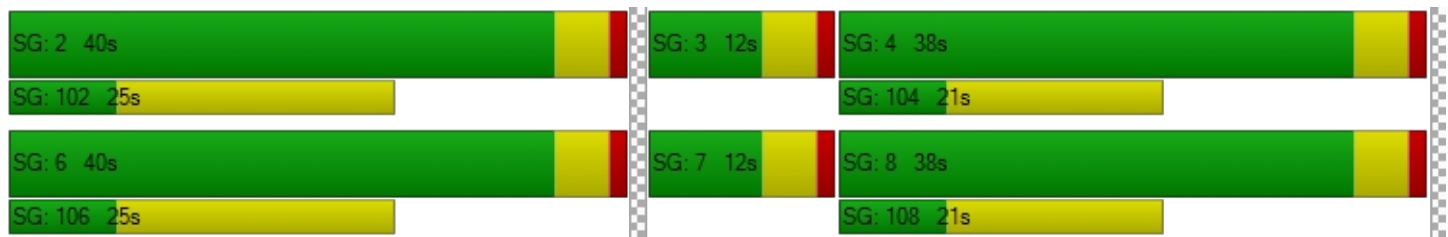
X, volume / capacity	0.21	0.19	0.20	0.45	0.16	0.38	0.40	0.04	0.39	0.39
d, Delay for Lane Group [s/veh]	26.51	26.28	31.11	28.46	6.97	12.21	12.58	6.82	14.10	14.16
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.77	1.16	1.14	3.36	0.61	4.52	4.40	0.15	4.66	4.63
50th-Percentile Queue Length [ft]	44.20	29.12	28.62	83.99	15.21	113.08	109.93	3.72	116.42	115.68
95th-Percentile Queue Length [veh]	3.18	2.10	2.06	6.05	1.10	8.01	7.84	0.27	8.20	8.15
95th-Percentile Queue Length [ft]	79.55	52.41	51.52	151.17	27.38	200.27	195.90	6.70	204.90	203.87

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.51	26.51	26.28	31.11	28.46	28.46	6.97	12.36	12.58	6.82	14.13	14.16
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.42			29.12			11.82			13.93		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.93											
Intersection LOS	B											
Intersection V/C	0.345											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	290	60	110	310	100	110	740	180	80	630	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	290	60	110	310	100	110	740	180	80	630	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	84	17	31	87	28	29	193	47	22	172	3
Total Analysis Volume [veh/h]	12	335	69	123	348	112	115	772	188	87	689	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.34	0.34	0.34	0.56	0.44	0.44	0.56	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.01	0.11	0.12	0.10	0.18	0.07	0.12	0.26	0.27	0.11	0.18	0.19
s, saturation flow rate [veh/h]	1018	1900	1713	1245	1900	1503	950	1900	1725	809	1900	1887
c, Capacity [veh/h]	125	406	366	441	646	511	552	831	754	445	824	819
d1, Uniform Delay [s]	41.63	31.25	31.50	21.62	24.05	21.23	10.28	19.31	19.51	11.62	17.72	17.72
k, delay calibration	0.04	0.04	0.04	0.05	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.37	0.46	0.14	0.26	0.08	0.26	3.16	3.72	0.98	1.61	1.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

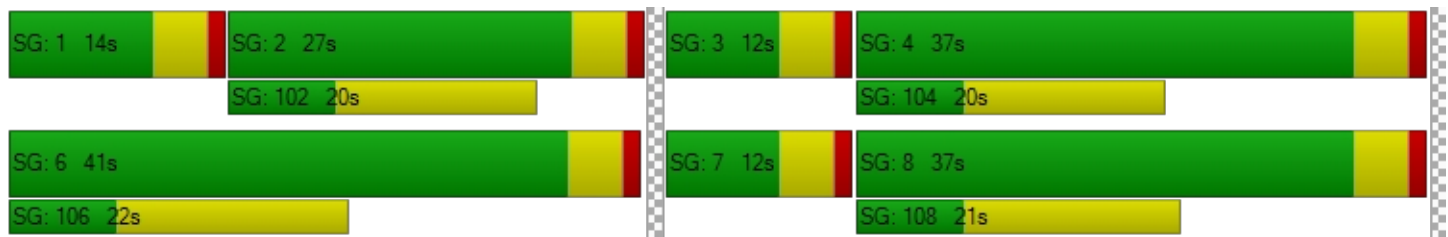
X, volume / capacity	0.10	0.51	0.54	0.28	0.54	0.22	0.21	0.60	0.61	0.20	0.43	0.43
d, Delay for Lane Group [s/veh]	41.76	31.61	31.96	21.76	24.32	21.31	10.54	22.47	23.24	12.60	19.32	19.35
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	3.92	3.80	1.82	5.85	1.66	1.04	8.25	7.88	0.87	5.23	5.21
50th-Percentile Queue Length [ft]	6.48	97.93	94.97	45.39	146.28	41.50	26.11	206.32	196.99	21.72	130.76	130.19
95th-Percentile Queue Length [veh]	0.47	7.05	6.84	3.27	9.82	2.99	1.88	12.96	12.48	1.56	8.98	8.95
95th-Percentile Queue Length [ft]	11.67	176.27	170.94	81.70	245.45	74.70	47.00	324.11	312.08	39.10	224.53	223.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.76	31.75	31.96	21.76	24.32	21.31	10.54	22.74	23.24	12.60	19.33	19.35
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.07			23.20			21.52			18.59		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.59											
Intersection LOS	C											
Intersection V/C	0.478											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	60	270	100	120	260	50	100	960	150	30	740	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	270	100	120	260	50	100	960	150	30	740	30
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	68	25	33	72	14	27	255	40	8	204	8
Total Analysis Volume [veh/h]	61	273	101	133	288	55	106	1021	160	33	815	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	7	34	34	7	46	46	35	35	35
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.52	0.52	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.06	0.14	0.07	0.07	0.15	0.04	0.06	0.32	0.33	0.07	0.22	0.23
s, saturation flow rate [veh/h]	1056	1900	1431	1810	1900	1486	1810	1900	1749	482	1900	1860
c, Capacity [veh/h]	201	471	355	149	725	567	136	981	903	142	741	726
d1, Uniform Delay [s]	37.50	29.75	27.41	40.91	20.31	17.89	40.90	15.43	15.72	36.66	21.60	21.65
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.42	0.16	6.92	0.13	0.03	3.60	2.88	3.46	3.78	3.24	3.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.58	0.28	0.89	0.40	0.10	0.78	0.61	0.64	0.23	0.58	0.58
d, Delay for Lane Group [s/veh]	37.81	30.17	27.57	47.83	20.44	17.92	44.51	18.31	19.19	40.45	24.85	25.02
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.25	5.06	1.72	3.13	4.22	0.71	2.42	8.93	8.82	0.82	7.48	7.41
50th-Percentile Queue Length [ft]	31.24	126.43	43.02	78.37	105.49	17.74	60.40	223.20	220.53	20.47	186.96	185.30
95th-Percentile Queue Length [veh]	2.25	8.75	3.10	5.64	7.59	1.28	4.35	13.83	13.69	1.47	11.96	11.88
95th-Percentile Queue Length [ft]	56.24	218.63	77.44	141.06	189.71	31.94	108.72	345.71	342.30	36.85	299.07	296.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.81	30.17	27.57	47.83	20.44	17.92	44.51	18.67	19.19	40.45	24.93	25.02
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	30.64			27.80			20.86			25.51		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.65											
Intersection LOS	C											
Intersection V/C	0.548											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	80	100	66	90	30	10	1250	190	20	990	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	80	100	66	90	30	10	1250	190	20	990	20
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	26	32	18	31	10	3	335	51	5	261	5
Total Analysis Volume [veh/h]	7	104	129	70	124	41	11	1339	204	21	1046	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	48	48	3	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.53	0.53	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.28	0.01	0.41	0.43	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1683	600	1810	1900	1784	1810	1900	1879
c, Capacity [veh/h]	476	170	36	1009	948	59	1034	1023
d1, Uniform Delay [s]	26.88	31.94	43.49	16.82	17.22	42.59	13.01	13.04
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	45.20	1.77	5.83	7.11	1.33	1.85	1.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.49	0.97	0.31	0.78	0.80	0.35	0.52	0.52
d, Delay for Lane Group [s/veh]	27.17	77.14	45.26	22.65	24.33	43.91	14.87	14.92
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.11	5.55	0.26	13.38	13.54	0.47	6.86	6.83
50th-Percentile Queue Length [ft]	102.74	138.87	6.43	334.49	338.56	11.86	171.51	170.80
95th-Percentile Queue Length [veh]	7.40	9.42	0.46	19.38	19.58	0.85	11.16	11.12
95th-Percentile Queue Length [ft]	184.94	235.50	11.57	484.46	489.44	21.36	278.90	277.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.17	27.17	0.00	77.14	77.14	45.26	23.35	24.33	43.91	14.89	14.92
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	27.17			77.14			23.63			15.46		
Approach LOS	C			E			C			B		
d_I, Intersection Delay [s/veh]	23.88											
Intersection LOS	C											
Intersection V/C	0.713											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	73.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	590	290	780	260	650	0	0	1170	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	590	290	780	260	650	0	0	1170	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	150	74	199	67	169	0	0	302	10
Total Analysis Volume [veh/h]	0	0	0	602	296	796	270	675	0	0	1208	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	15	50	31	31
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.17	0.56	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.49	0.24	0.27	0.47	0.15	0.19	0.23	0.22
s, saturation flow rate [veh/h]	900	1867	1442	900	1810	3618	3618	1853
c, Capacity [veh/h]	304	631	487	304	306	2026	1230	630
d1, Uniform Delay [s]	29.80	25.99	26.85	29.80	36.53	10.71	25.46	25.28
k, delay calibration	0.50	0.18	0.25	0.50	0.17	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	223.0	2.55	6.21	190.3	12.19	0.44	3.01	5.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

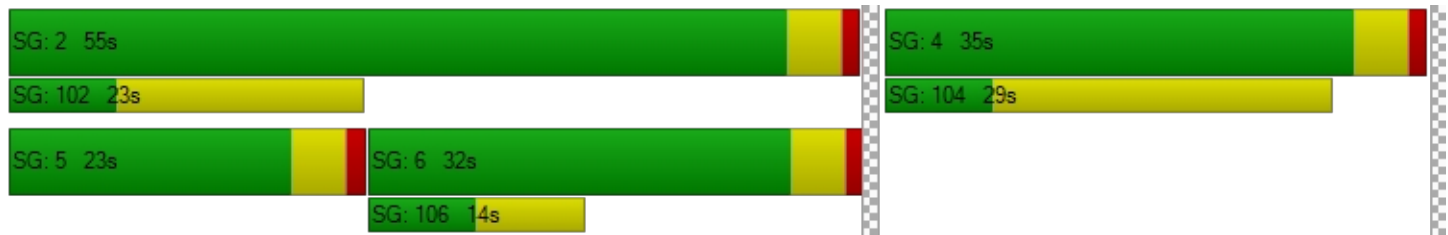
X, volume / capacity	1.46	0.71	0.78	1.38	0.88	0.33	0.68	0.66
d, Delay for Lane Group [s/veh]	252.8	28.54	33.05	220.1	48.72	11.15	28.47	30.66
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	24.80	8.13	7.59	22.04	6.71	3.49	7.88	8.25
50th-Percentile Queue Length [ft]	619.9	203.3	189.8	550.9	167.83	87.30	196.92	206.32
95th-Percentile Queue Length [veh]	39.98	12.81	12.11	35.28	10.96	6.29	12.48	12.96
95th-Percentile Queue Length [ft]	999.5	320.2	302.8	881.8	274.06	157.14	311.99	324.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	185.67	28.63	136.92	48.72	11.15	0.00	0.00	29.15	30.66
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			135.66			21.89			29.20		
Approach LOS	A			F			C			C		
d_I, Intersection Delay [s/veh]	73.81											
Intersection LOS	E											
Intersection V/C	0.872											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	180	380	260	0	0	0	0	730	710	820	990	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	380	260	0	0	0	0	730	710	820	990	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	122	83	0	0	0	0	198	192	220	266	0
Total Analysis Volume [veh/h]	230	487	333	0	0	0	0	791	770	881	1064	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22		26	26	26	28	59
g / C, Green / Cycle	0.24	0.24	0.24		0.29	0.29	0.29	0.31	0.66
(v / s)_j Volume / Saturation Flow Rate	0.20	0.20	0.21		0.22	0.26	0.26	0.25	0.29
s, saturation flow rate [veh/h]	1843	1729	1564		3618	1494	1494	3514	3618
c, Capacity [veh/h]	443	415	376		1064	439	439	1097	2379
d1, Uniform Delay [s]	32.53	32.52	33.03		28.61	30.37	30.37	28.43	7.48
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.72	2.83		0.37	2.48	2.48	6.24	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

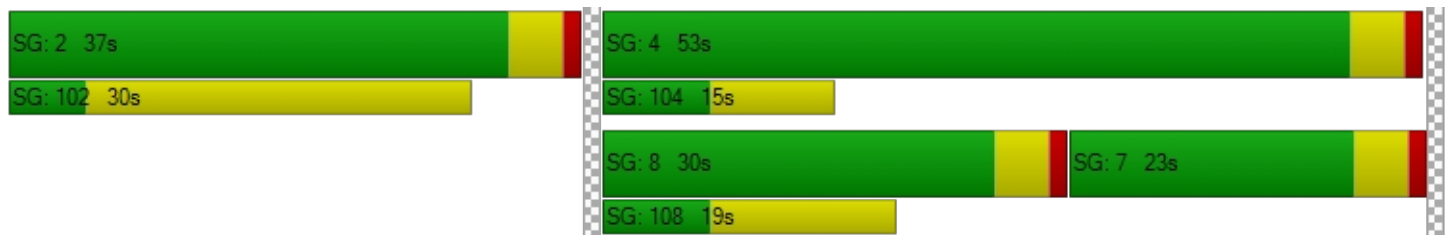
X, volume / capacity	0.84	0.84	0.89		0.73	0.89	0.89	0.80	0.45
d, Delay for Lane Group [s/veh]	34.15	34.25	35.86		28.98	32.85	32.85	34.68	8.09
Lane Group LOS	C	C	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.56	7.10	7.02		7.29	7.99	7.99	9.36	4.48
50th-Percentile Queue Length [ft]	188.97	177.56	175.56		182.35	199.71	199.71	234.01	111.94
95th-Percentile Queue Length [veh]	12.07	11.47	11.37		11.72	12.62	12.62	14.38	7.95
95th-Percentile Queue Length [ft]	301.69	286.83	284.20		293.08	315.59	315.59	359.45	198.69

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.15	34.22	35.86	0.00	0.00	0.00	0.00	28.98	32.85	34.68	8.09	0.00
Movement LOS	C	C	D					C	C	C	A	
d_A, Approach Delay [s/veh]	34.72			0.00			30.92			20.13		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	27.19											
Intersection LOS	C											
Intersection V/C	0.725											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	160	470	120	170	370	70	110	1120	110	80	960	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	470	120	170	370	70	110	1120	110	80	960	80
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	120	31	49	107	20	31	313	31	23	280	23
Total Analysis Volume [veh/h]	163	479	122	198	430	81	123	1254	123	93	1122	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	33	33	14	34	34	10	49	49	5	45	45
g / C, Green / Cycle	0.11	0.27	0.27	0.12	0.29	0.29	0.08	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.09	0.25	0.08	0.11	0.14	0.14	0.07	0.35	0.08	0.05	0.31	0.06
s, saturation flow rate [veh/h]	1810	1900	1565	1810	1900	1777	1810	3618	1565	1810	3618	1571
c, Capacity [veh/h]	191	515	424	218	544	509	149	1488	644	82	1354	588
d1, Uniform Delay [s]	52.79	42.65	34.59	52.12	35.48	35.56	54.21	31.82	22.57	57.31	34.08	24.99
k, delay calibration	0.04	0.29	0.11	0.29	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.16	17.57	0.37	28.04	0.66	0.73	4.26	5.97	0.66	72.91	5.98	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

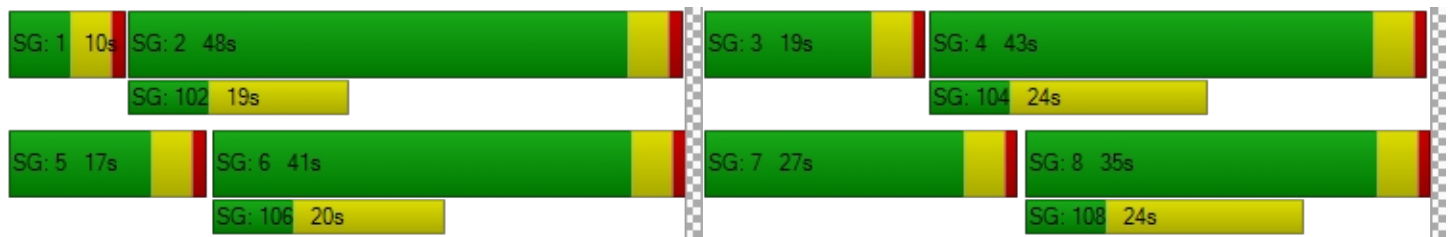
X, volume / capacity	0.85	0.93	0.29	0.91	0.48	0.49	0.82	0.84	0.19	1.13	0.83	0.16
d, Delay for Lane Group [s/veh]	56.95	60.22	34.96	80.16	36.14	36.29	58.47	37.79	23.22	130.21	40.05	25.56
Lane Group LOS	E	E	C	F	D	D	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	5.01	16.09	2.85	7.53	6.39	6.09	3.80	17.07	2.32	4.13	15.56	1.85
50th-Percentile Queue Length [ft]	125.16	402.23	71.21	188.16	159.75	152.24	95.09	426.86	58.04	103.15	388.97	46.21
95th-Percentile Queue Length [veh]	8.68	22.67	5.13	12.03	10.54	10.14	6.85	23.85	4.18	7.43	22.03	3.33
95th-Percentile Queue Length [ft]	216.90	566.69	128.17	300.64	263.39	253.41	171.16	596.28	104.47	185.67	550.69	83.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.95	60.22	34.96	80.16	36.20	36.29	58.47	37.79	23.22	130.21	40.05	25.56
Movement LOS	E	E	C	F	D	D	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.49			48.49			38.29			45.43		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	45.23											
Intersection LOS	D											
Intersection V/C	0.760											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.413

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	30	570	20	90	460	50	70	390	60	80	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	570	20	90	460	50	70	390	60	80	380	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	151	5	24	124	13	21	116	18	22	104	11
Total Analysis Volume [veh/h]	32	606	21	97	495	54	83	465	72	88	416	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.17	0.12	0.15	0.15	0.09	0.24	0.05	0.09	0.25
s, saturation flow rate [veh/h]	871	1900	1874	808	1900	1827	944	1900	1568	940	1862
c, Capacity [veh/h]	458	1011	997	422	1011	972	203	670	553	205	657
d1, Uniform Delay [s]	13.85	10.49	10.50	15.81	10.25	10.27	33.98	22.19	17.57	33.99	22.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.06
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.80	0.82	1.27	0.68	0.71	0.49	0.66	0.04	0.53	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.31	0.31	0.23	0.28	0.28	0.41	0.69	0.13	0.43	0.70
d, Delay for Lane Group [s/veh]	14.15	11.29	11.31	17.09	10.93	10.98	34.47	22.85	17.61	34.52	23.01
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.37	3.06	3.03	1.28	2.64	2.57	1.53	7.07	0.86	1.62	7.03
50th-Percentile Queue Length [ft]	9.20	76.51	75.84	31.88	66.01	64.30	38.13	176.67	21.43	40.55	175.68
95th-Percentile Queue Length [veh]	0.66	5.51	5.46	2.30	4.75	4.63	2.75	11.43	1.54	2.92	11.37
95th-Percentile Queue Length [ft]	16.56	137.73	136.52	57.38	118.83	115.74	68.63	285.67	38.58	73.00	284.36

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.15	11.30	11.31	17.09	10.95	10.98	34.47	22.85	17.61	34.52	23.01	23.01
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.44			11.87			23.80			24.86		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.62											
Intersection LOS	B											
Intersection V/C	0.413											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	140	580	10	30	510	50	140	440	50	40	290	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	580	10	30	510	50	140	440	50	40	290	90
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	162	3	8	139	14	40	127	14	11	79	24
Total Analysis Volume [veh/h]	156	648	11	33	556	55	161	507	58	44	315	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	35	35	35	35	35
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.19	0.17	0.17	0.04	0.16	0.16	0.15	0.30	0.05	0.17	0.06
s, saturation flow rate [veh/h]	822	1900	1887	787	1900	1828	1080	1857	859	1900	1572
c, Capacity [veh/h]	414	973	966	395	973	936	327	716	147	733	606
d1, Uniform Delay [s]	19.60	12.96	12.96	16.93	12.79	12.82	31.48	24.41	40.32	20.36	18.11
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.17	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.61	0.95	0.96	0.42	0.86	0.91	0.43	3.02	0.42	0.15	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.38	0.34	0.34	0.08	0.32	0.32	0.49	0.79	0.30	0.43	0.16
d, Delay for Lane Group [s/veh]	22.21	13.91	13.92	17.35	13.65	13.73	31.91	27.43	40.74	20.51	18.16
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.56	3.88	3.86	0.45	3.59	3.50	3.10	10.57	0.94	4.66	1.29
50th-Percentile Queue Length [ft]	63.89	96.99	96.50	11.36	89.64	87.57	77.62	264.14	23.57	116.61	32.26
95th-Percentile Queue Length [veh]	4.60	6.98	6.95	0.82	6.45	6.30	5.59	15.90	1.70	8.21	2.32
95th-Percentile Queue Length [ft]	115.00	174.57	173.70	20.45	161.35	157.62	139.71	397.42	42.43	205.16	58.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.21	13.91	13.92	17.35	13.68	13.73	31.91	27.43	27.43	40.74	20.51	18.16
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	15.50			13.88			28.42			21.95		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.77											
Intersection LOS	B											
Intersection V/C	0.494											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	460	40	0	500	50	50	110	70	40	170	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	460	40	0	500	50	50	110	70	40	170	40
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	125	11	0	148	15	14	31	20	12	51	12
Total Analysis Volume [veh/h]	32	498	43	0	591	59	57	125	80	48	206	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.00	0.35	0.16	0.14	0.03
s, saturation flow rate [veh/h]	794	1853	878	1844	1602	1771	1522
c, Capacity [veh/h]	178	784	252	780	753	822	646
d1, Uniform Delay [s]	26.92	14.15	0.00	15.47	11.72	11.51	10.30
k, delay calibration	0.04	0.08	0.04	0.18	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.77	0.00	3.93	1.27	0.97	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

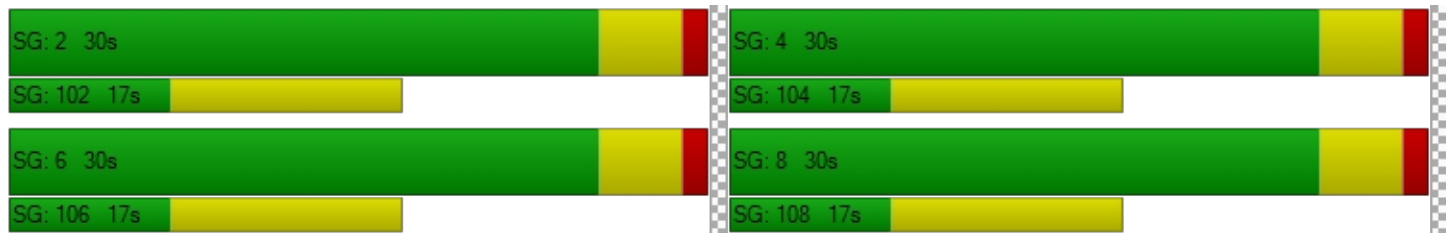
X, volume / capacity	0.18	0.69	0.00	0.83	0.35	0.31	0.07
d, Delay for Lane Group [s/veh]	27.10	14.92	0.00	19.40	12.99	12.49	10.52
Lane Group LOS	C	B	A	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.32	0.00	7.62	2.34	2.20	0.37
50th-Percentile Queue Length [ft]	10.71	133.04	0.00	190.55	58.43	54.89	9.34
95th-Percentile Queue Length [veh]	0.77	9.10	0.00	12.15	4.21	3.95	0.67
95th-Percentile Queue Length [ft]	19.29	227.62	0.00	303.74	105.18	98.80	16.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.10	14.92	14.92	0.00	19.40	19.40	12.99	12.99	12.99	12.49	12.49	10.52
Movement LOS	C	B	B	A	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.60			19.40			12.99			12.17		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.02											
Intersection LOS	B											
Intersection V/C	0.516											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	920	70	50	810	40	60	240	100	120	330	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	920	70	50	810	40	60	240	100	120	330	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	242	18	13	210	10	18	73	31	32	88	8
Total Analysis Volume [veh/h]	42	969	74	52	839	41	73	293	122	128	353	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25	25	25
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.07	0.28	0.28	0.09	0.23	0.24	0.07	0.15	0.08	0.12	0.19	0.02
s, saturation flow rate [veh/h]	635	1900	1839	548	1900	1851	1033	1900	1531	1085	1900	1550
c, Capacity [veh/h]	359	1086	1051	304	1086	1058	217	595	480	258	595	486
d1, Uniform Delay [s]	14.25	10.16	10.19	16.46	9.57	9.60	33.07	22.29	20.49	32.36	23.16	19.25
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	1.56	1.63	1.22	1.14	1.19	0.34	0.24	0.10	0.55	0.35	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

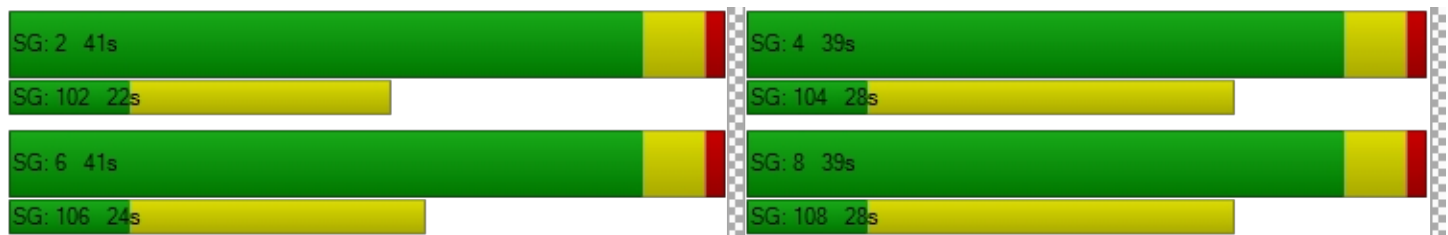
X, volume / capacity	0.12	0.49	0.49	0.17	0.41	0.41	0.34	0.49	0.25	0.50	0.59	0.07
d, Delay for Lane Group [s/veh]	14.91	11.71	11.82	17.68	10.71	10.79	33.41	22.53	20.59	32.91	23.51	19.27
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.50	5.17	5.07	0.70	4.06	4.02	1.32	4.32	1.65	2.37	5.51	0.41
50th-Percentile Queue Length [ft]	12.59	129.15	126.83	17.61	101.54	100.44	33.06	107.96	41.28	59.37	137.80	10.35
95th-Percentile Queue Length [veh]	0.91	8.89	8.77	1.27	7.31	7.23	2.38	7.73	2.97	4.27	9.36	0.74
95th-Percentile Queue Length [ft]	22.66	222.34	219.18	31.70	182.77	180.80	59.50	193.15	74.30	106.86	234.06	18.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.91	11.76	11.82	17.68	10.74	10.79	33.41	22.53	20.59	32.91	23.51	19.27
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	11.89			11.13			23.67			25.59		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.89											
Intersection LOS	B											
Intersection V/C	0.466											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	110	80	40	70	60	40	300	80	40	410	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	110	80	40	70	60	40	300	80	40	410	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	31	23	10	18	15	11	83	22	11	113	6
Total Analysis Volume [veh/h]	23	125	91	41	72	62	44	330	88	44	453	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	54	54	54	54	54	54
g / C, Green / Cycle	0.20	0.20	0.20	0.68	0.68	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.04	0.05	0.17	0.06	0.04	0.24	0.01
s, saturation flow rate [veh/h]	1678	1315	1575	951	1900	1559	1063	1900	1546
c, Capacity [veh/h]	393	330	322	607	1292	1061	703	1292	1051
d1, Uniform Delay [s]	29.35	26.87	26.27	8.73	4.94	4.32	7.45	5.36	4.14
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.53	0.61	0.29	0.23	0.48	0.15	0.17	0.75	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

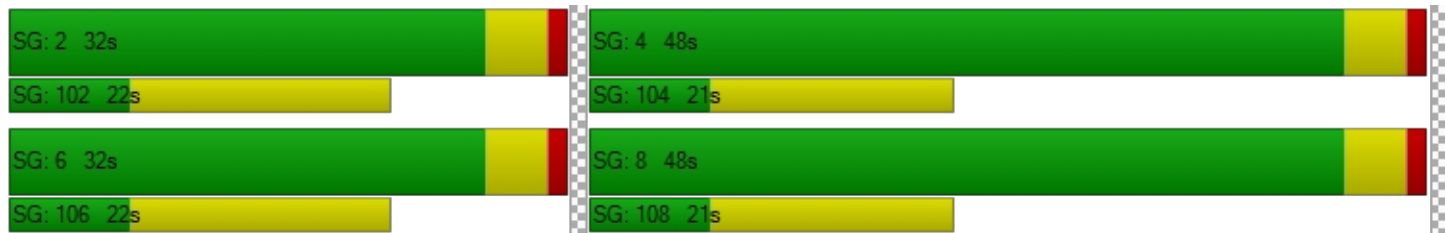
X, volume / capacity	0.61	0.34	0.19	0.07	0.26	0.08	0.06	0.35	0.02
d, Delay for Lane Group [s/veh]	30.87	27.48	26.56	8.96	5.41	4.48	7.62	6.11	4.17
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.21	1.80	0.96	0.37	1.85	0.44	0.33	2.77	0.10
50th-Percentile Queue Length [ft]	105.23	45.07	24.10	9.33	46.31	10.95	8.29	69.33	2.62
95th-Percentile Queue Length [veh]	7.57	3.25	1.74	0.67	3.33	0.79	0.60	4.99	0.19
95th-Percentile Queue Length [ft]	189.34	81.13	43.38	16.80	83.36	19.70	14.93	124.79	4.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.87	30.87	30.87	27.48	27.48	26.56	8.96	5.41	4.48	7.62	6.11	4.17
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.87			27.16			5.57			6.15		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.83											
Intersection LOS	B											
Intersection V/C	0.381											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.414

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	630	50	70	480	50	40	400	0	110	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	630	50	70	480	50	40	400	0	110	380	40
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	164	13	18	126	13	11	107	0	29	101	11
Total Analysis Volume [veh/h]	21	654	52	73	503	52	43	426	0	117	405	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.19	0.10	0.15	0.15	0.04	0.22	0.00	0.12	0.21	0.03
s, saturation flow rate [veh/h]	863	1900	1841	751	1900	1827	993	1900	1615	974	1900	1576
c, Capacity [veh/h]	454	1001	970	386	1001	962	245	680	578	230	680	565
d1, Uniform Delay [s]	13.74	11.03	11.05	16.26	10.51	10.53	29.79	21.24	0.00	33.30	20.94	16.94
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.99	1.04	1.08	0.70	0.74	0.13	0.76	0.00	0.65	0.47	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.36	0.36	0.19	0.28	0.28	0.18	0.63	0.00	0.51	0.60	0.08
d, Delay for Lane Group [s/veh]	13.93	12.02	12.08	17.34	11.21	11.27	29.92	22.00	0.00	33.94	21.41	16.96
Lane Group LOS	B	B	B	B	B	B	C	C	A	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.24	3.63	3.56	0.97	2.71	2.65	0.72	6.40	0.00	2.19	5.95	0.51
50th-Percentile Queue Length [ft]	5.97	90.74	88.94	24.27	67.83	66.22	18.06	159.91	0.00	54.70	148.77	12.67
95th-Percentile Queue Length [veh]	0.43	6.53	6.40	1.75	4.88	4.77	1.30	10.54	0.00	3.94	9.95	0.91
95th-Percentile Queue Length [ft]	10.75	163.33	160.09	43.68	122.10	119.20	32.51	263.60	0.00	98.45	248.79	22.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.93	12.05	12.08	17.34	11.24	11.27	29.92	22.00	0.00	33.94	21.41	16.96
Movement LOS	B	B	B	B	B	B	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	12.11			11.95			22.72			23.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.88											
Intersection LOS	B											
Intersection V/C	0.414											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	440	40	60	350	40	40	400	60	90	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	440	40	60	350	40	40	400	60	90	360	40
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	122	11	17	96	11	11	112	17	24	95	11
Total Analysis Volume [veh/h]	33	489	44	66	386	44	45	446	67	95	382	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	23	23	23	23	23	23
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.03	0.07	0.20	0.03	0.04	0.23	0.04	0.10	0.20	0.03
s, saturation flow rate [veh/h]	1011	1900	1556	921	1900	1555	1002	1900	1518	946	1900	1533
c, Capacity [veh/h]	466	1026	840	391	1026	840	269	624	498	227	624	503
d1, Uniform Delay [s]	14.85	9.95	7.61	17.79	9.28	7.61	25.49	20.61	16.50	29.34	19.74	16.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	1.59	0.12	0.93	1.05	0.12	0.11	0.58	0.05	0.46	0.37	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.48	0.05	0.17	0.38	0.05	0.17	0.72	0.13	0.42	0.61	0.08
d, Delay for Lane Group [s/veh]	15.14	11.54	7.73	18.72	10.33	7.73	25.60	21.18	16.54	29.80	20.10	16.24
Lane Group LOS	B	B	A	B	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.36	4.29	0.29	0.83	3.13	0.29	0.64	6.02	0.72	1.51	4.92	0.44
50th-Percentile Queue Length [ft]	8.93	107.33	7.29	20.75	78.15	7.29	15.89	150.50	17.96	37.65	123.00	11.06
95th-Percentile Queue Length [veh]	0.64	7.69	0.53	1.49	5.63	0.53	1.14	10.04	1.29	2.71	8.56	0.80
95th-Percentile Queue Length [ft]	16.07	192.28	13.13	37.35	140.68	13.13	28.61	251.10	32.32	67.77	213.94	19.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.14	11.54	7.73	18.72	10.33	7.73	25.60	21.18	16.54	29.80	20.10	16.24
Movement LOS	B	B	A	B	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.45			11.22			20.98			21.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.34											
Intersection LOS	B											
Intersection V/C	0.492											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	370	10	140	420	130	40	400	180	140	280	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	370	10	140	420	130	40	400	180	140	280	70
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	107	3	43	128	40	11	111	50	36	73	18
Total Analysis Volume [veh/h]	46	427	12	171	513	159	45	445	200	145	290	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	29	29	29	29	29	29
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.06	0.12	0.12	0.18	0.18	0.19	0.04	0.23	0.13	0.15	0.15	0.05
s, saturation flow rate [veh/h]	777	1900	1879	962	1900	1728	1096	1900	1566	954	1900	1568
c, Capacity [veh/h]	336	843	834	442	843	767	404	796	656	293	796	657
d1, Uniform Delay [s]	18.25	12.25	12.26	17.87	13.27	13.31	19.19	15.42	13.54	26.42	13.94	12.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.85	0.75	0.77	2.55	1.51	1.69	0.04	0.23	0.10	0.48	0.10	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

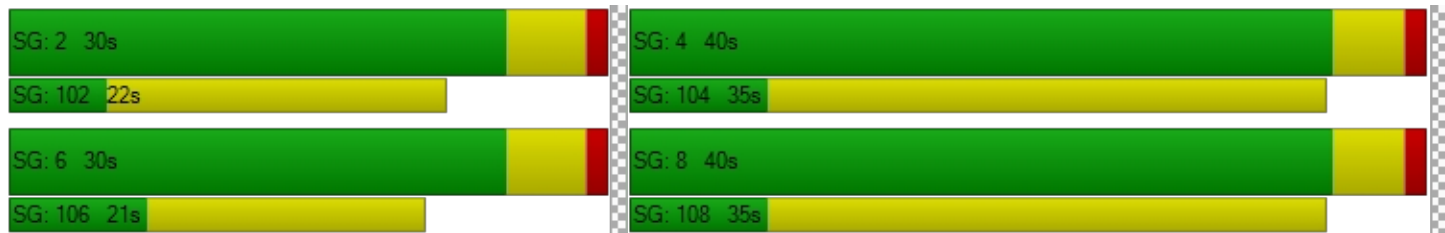
X, volume / capacity	0.14	0.26	0.26	0.39	0.41	0.42	0.11	0.56	0.30	0.49	0.36	0.11
d, Delay for Lane Group [s/veh]	19.10	13.00	13.02	20.42	14.78	15.00	19.23	15.65	13.63	26.90	14.04	12.41
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.67	2.49	2.47	2.19	3.46	3.23	0.53	4.94	1.95	2.21	2.90	0.65
50th-Percentile Queue Length [ft]	16.75	62.21	61.84	54.81	86.56	80.83	13.28	123.40	48.63	55.14	72.50	16.22
95th-Percentile Queue Length [veh]	1.21	4.48	4.45	3.95	6.23	5.82	0.96	8.58	3.50	3.97	5.22	1.17
95th-Percentile Queue Length [ft]	30.15	111.98	111.32	98.65	155.81	145.50	23.90	214.49	87.53	99.26	130.51	29.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.10	13.01	13.02	20.42	14.85	15.00	19.23	15.65	13.63	26.90	14.04	12.41
Movement LOS	B	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.59			16.01			15.30			17.48		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.65											
Intersection LOS	B											
Intersection V/C	0.421											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	520	60	50	450	20	60	60	40	20	110	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	520	60	50	450	20	60	60	40	20	110	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	154	18	14	130	6	16	16	11	6	33	6
Total Analysis Volume [veh/h]	12	618	71	58	519	23	65	65	43	24	132	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	7	7
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.01	0.37	0.08	0.27	0.02	0.11	0.10
s, saturation flow rate [veh/h]	884	1854	756	1900	1521	1630	1797
c, Capacity [veh/h]	443	925	327	948	759	516	527
d1, Uniform Delay [s]	9.33	6.67	13.16	5.76	4.25	11.08	11.10
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.46	0.10	0.18	0.01	0.14	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

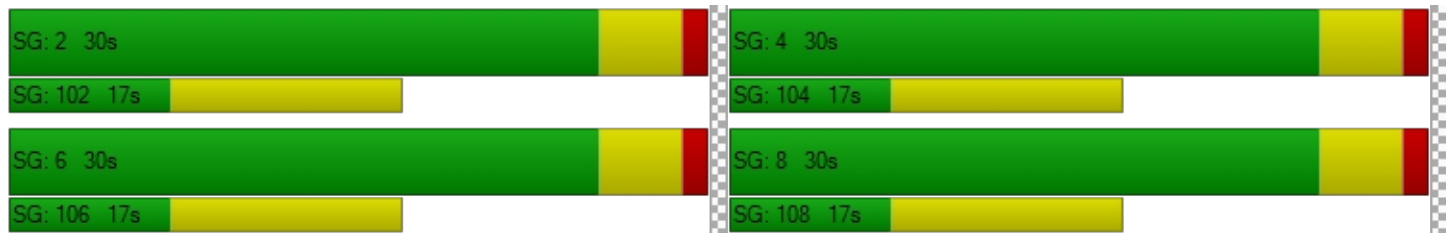
X, volume / capacity	0.03	0.75	0.18	0.55	0.03	0.34	0.34
d, Delay for Lane Group [s/veh]	9.34	7.12	13.25	5.95	4.26	11.23	11.24
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.05	2.03	0.32	1.29	0.04	0.80	0.84
50th-Percentile Queue Length [ft]	1.24	50.73	8.08	32.34	1.05	20.06	20.91
95th-Percentile Queue Length [veh]	0.09	3.65	0.58	2.33	0.08	1.44	1.51
95th-Percentile Queue Length [ft]	2.23	91.32	14.55	58.22	1.89	36.11	37.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.34	7.12	7.12	13.25	5.95	4.26	11.23	11.23	11.23	11.24	11.24	11.24
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.16			6.59			11.23			11.24		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.82											
Intersection LOS	A											
Intersection V/C	0.478											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	930	100	80	990	30	80	150	70	90	220	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	930	100	80	990	30	80	150	70	90	220	40
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	257	28	21	258	8	23	43	20	26	63	11
Total Analysis Volume [veh/h]	33	1026	110	83	1030	31	92	173	81	103	251	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.06	0.30	0.31	0.16	0.28	0.28	0.09	0.15	0.09	0.16
s, saturation flow rate [veh/h]	539	1900	1827	503	1900	1873	1078	1748	1105	1830
c, Capacity [veh/h]	298	1090	1049	273	1090	1075	252	544	274	569
d1, Uniform Delay [s]	16.13	10.43	10.46	19.34	10.10	10.11	31.59	22.20	30.65	22.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	1.84	1.94	2.84	1.57	1.61	0.33	0.23	0.32	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

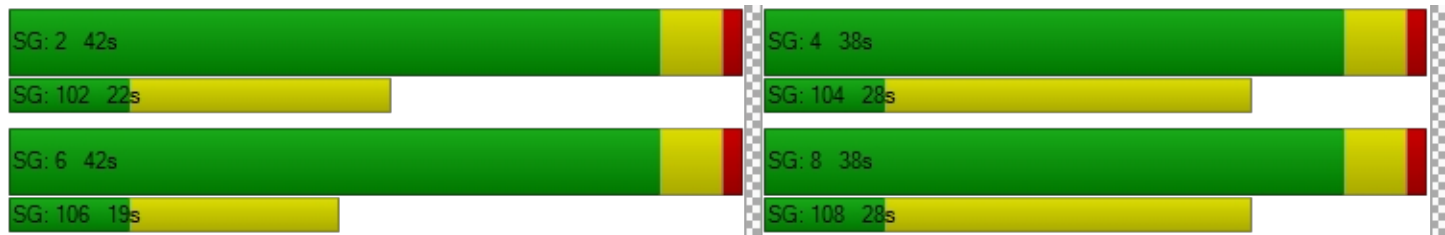
X, volume / capacity	0.11	0.53	0.53	0.30	0.49	0.49	0.37	0.47	0.38	0.52
d, Delay for Lane Group [s/veh]	16.88	12.28	12.40	22.19	11.67	11.72	31.92	22.43	30.97	22.93
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.43	5.84	5.69	1.36	5.53	5.49	1.61	3.66	1.77	4.37
50th-Percentile Queue Length [ft]	10.84	145.89	142.16	33.90	138.18	137.25	40.24	91.44	44.35	109.13
95th-Percentile Queue Length [veh]	0.78	9.80	9.60	2.44	9.38	9.33	2.90	6.58	3.19	7.79
95th-Percentile Queue Length [ft]	19.52	244.94	239.93	61.02	234.57	233.31	72.42	164.59	79.84	194.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.88	12.33	12.40	22.19	11.69	11.72	31.92	22.43	22.43	30.97	22.93	22.93
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.47			12.45			24.96			25.00		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.51											
Intersection LOS	B											
Intersection V/C	0.468											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	90	100	30	110	30	80	330	40	50	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	90	100	30	110	30	80	330	40	50	360	40
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	31	35	8	29	8	21	86	10	13	93	10
Total Analysis Volume [veh/h]	14	125	138	31	114	31	83	344	42	52	373	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	54	54	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.17	0.09	0.02	0.47	0.03	0.38	0.03
s, saturation flow rate [veh/h]	1676	1552	1526	910	1560	1113	1548
c, Capacity [veh/h]	396	378	317	670	1056	804	1048
d1, Uniform Delay [s]	29.92	27.08	25.53	10.77	4.28	8.90	4.28
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	0.64	0.13	4.60	0.07	2.48	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

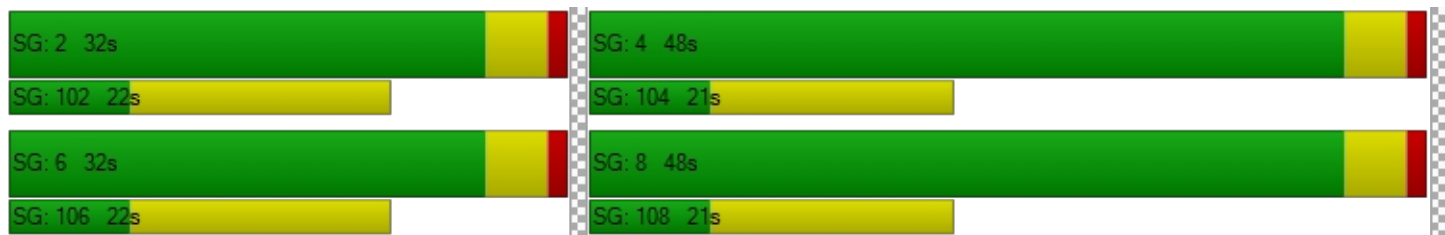
X, volume / capacity	0.70	0.38	0.10	0.64	0.04	0.53	0.04
d, Delay for Lane Group [s/veh]	32.17	27.72	25.67	15.38	4.35	11.38	4.35
Lane Group LOS	C	C	C	B	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	5.04	2.34	0.47	4.91	0.20	3.78	0.19
50th-Percentile Queue Length [ft]	126.00	58.43	11.73	122.68	4.90	94.51	4.78
95th-Percentile Queue Length [veh]	8.72	4.21	0.84	8.54	0.35	6.80	0.34
95th-Percentile Queue Length [ft]	218.05	105.18	21.12	213.50	8.82	170.12	8.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.17	32.17	32.17	27.72	27.72	25.67	15.38	15.38	4.35	11.38	11.38	4.35
Movement LOS	C	C	C	C	C	C	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	32.17			27.36			14.39			10.77		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.36											
Intersection LOS	B											
Intersection V/C	0.635											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	60	680	50	40	730	70	90	350	40	100	330	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	680	50	40	730	70	90	350	40	100	330	50
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	186	14	10	189	18	23	90	10	28	91	14
Total Analysis Volume [veh/h]	66	744	55	41	757	73	93	360	41	111	366	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.10	0.21	0.21	0.06	0.22	0.22	0.10	0.22	0.11	0.23
s, saturation flow rate [veh/h]	670	1900	1845	689	1900	1832	972	1861	997	1844
c, Capacity [veh/h]	350	1024	994	362	1024	987	207	644	224	638
d1, Uniform Delay [s]	16.61	10.79	10.81	15.58	10.92	10.93	34.20	21.80	33.70	22.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.07	0.04	0.10
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.19	1.14	1.19	0.63	1.22	1.28	0.57	0.61	0.63	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.39	0.40	0.11	0.41	0.41	0.45	0.62	0.50	0.66
d, Delay for Lane Group [s/veh]	17.80	11.93	11.99	16.21	12.14	12.22	34.76	22.41	34.33	23.20
Lane Group LOS	B	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.90	4.11	4.03	0.52	4.34	4.23	1.72	5.94	2.05	6.41
50th-Percentile Queue Length [ft]	22.53	102.73	100.70	13.12	108.45	105.68	43.02	148.51	51.27	160.18
95th-Percentile Queue Length [veh]	1.62	7.40	7.25	0.94	7.75	7.60	3.10	9.94	3.69	10.56
95th-Percentile Queue Length [ft]	40.55	184.92	181.26	23.61	193.84	189.97	77.43	248.43	92.28	263.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.80	11.96	11.99	16.21	12.17	12.22	34.76	22.41	22.41	34.33	23.20	23.20
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.41			12.37			24.74			25.52		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.13											
Intersection LOS	B											
Intersection V/C	0.451											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	40	530	10	20	440	40	60	290	20	120	210	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	530	10	20	440	40	60	290	20	120	210	60
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	146	3	6	133	12	16	75	5	30	53	15
Total Analysis Volume [veh/h]	44	584	11	24	530	48	62	302	21	121	212	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	23	23	23	23
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.05	0.31	0.01	0.03	0.28	0.03	0.06	0.17	0.11	0.15
s, saturation flow rate [veh/h]	882	1900	1552	841	1900	1541	1077	1866	1053	1765
c, Capacity [veh/h]	411	1040	849	376	1040	844	279	599	256	567
d1, Uniform Delay [s]	15.58	10.36	7.22	16.45	9.95	7.40	25.97	19.50	28.86	19.07
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	2.19	0.03	0.33	1.79	0.13	0.15	0.28	0.50	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

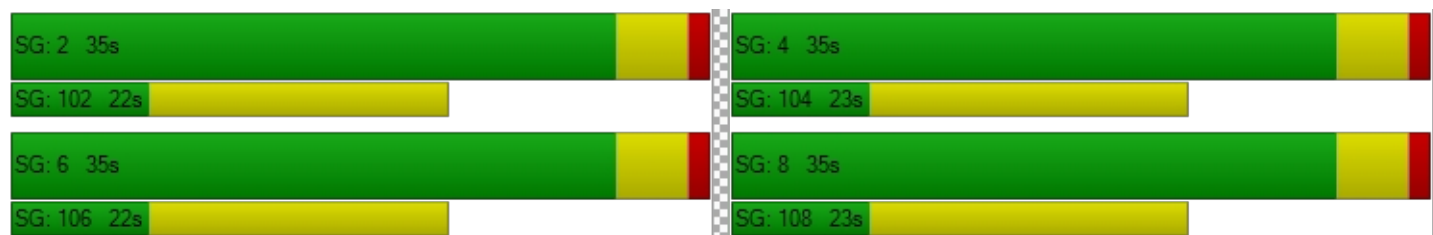
X, volume / capacity	0.11	0.56	0.01	0.06	0.51	0.06	0.22	0.54	0.47	0.48
d, Delay for Lane Group [s/veh]	16.10	12.55	7.25	16.77	11.73	7.53	26.12	19.78	29.36	19.31
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.50	5.45	0.07	0.28	4.72	0.31	0.88	3.98	1.88	3.29
50th-Percentile Queue Length [ft]	12.56	136.30	1.75	7.06	117.91	7.83	21.88	99.44	46.95	82.18
95th-Percentile Queue Length [veh]	0.90	9.28	0.13	0.51	8.28	0.56	1.58	7.16	3.38	5.92
95th-Percentile Queue Length [ft]	22.61	232.04	3.14	12.71	206.95	14.10	39.38	179.00	84.52	147.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.10	12.55	7.25	16.77	11.73	7.53	26.12	19.78	19.78	29.36	19.31	19.31
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.70			11.60			20.80			22.40		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.81											
Intersection LOS	B											
Intersection V/C	0.480											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	570	160	120	440	110	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	570	160	120	440	110	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	47	34	124	33	24
Total Analysis Volume [veh/h]	676	190	135	494	134	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	6	6
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.36	0.12	0.18	0.26	0.07	0.06
s, saturation flow rate [veh/h]	1900	1555	768	1900	1810	1510
c, Capacity [veh/h]	1019	834	400	1019	341	284
d1, Uniform Delay [s]	5.58	4.09	11.70	4.86	11.88	11.76
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.05	0.18	0.13	0.27	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

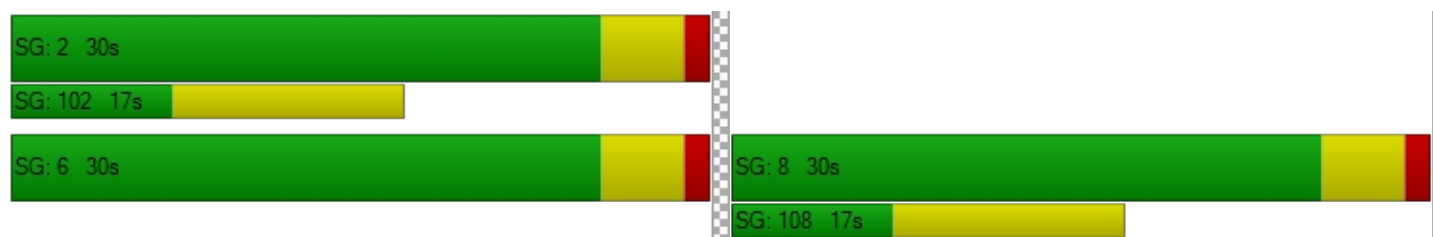
X, volume / capacity	0.66	0.23	0.34	0.48	0.39	0.34
d, Delay for Lane Group [s/veh]	5.86	4.14	11.88	4.99	12.16	12.02
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.55	0.32	0.70	0.97	0.73	0.53
50th-Percentile Queue Length [ft]	38.80	7.89	17.50	24.37	18.37	13.21
95th-Percentile Queue Length [veh]	2.79	0.57	1.26	1.75	1.32	0.95
95th-Percentile Queue Length [ft]	69.85	14.21	31.51	43.87	33.07	23.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.86	4.14	11.88	4.99	12.16	12.02
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.48		6.47		12.10	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.73					
Intersection LOS	A					
Intersection V/C	0.430					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	940	100	90	980	50	60	250	120	80	400	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	940	100	90	980	50	60	250	120	80	400	20
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	279	30	24	256	13	17	71	34	23	113	6
Total Analysis Volume [veh/h]	36	1116	119	94	1024	52	68	283	136	91	453	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.07	0.31	0.08	0.18	0.29	0.29	0.07	0.15	0.09	0.08	0.25
s, saturation flow rate [veh/h]	532	3618	1556	512	1900	1856	926	1900	1558	1100	1880
c, Capacity [veh/h]	261	1911	822	245	1004	981	187	678	556	323	670
d1, Uniform Delay [s]	19.72	12.86	9.63	23.85	12.45	12.48	34.56	19.45	18.13	27.07	22.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.10	1.31	0.37	4.51	2.09	2.17	1.18	0.41	0.23	0.47	2.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

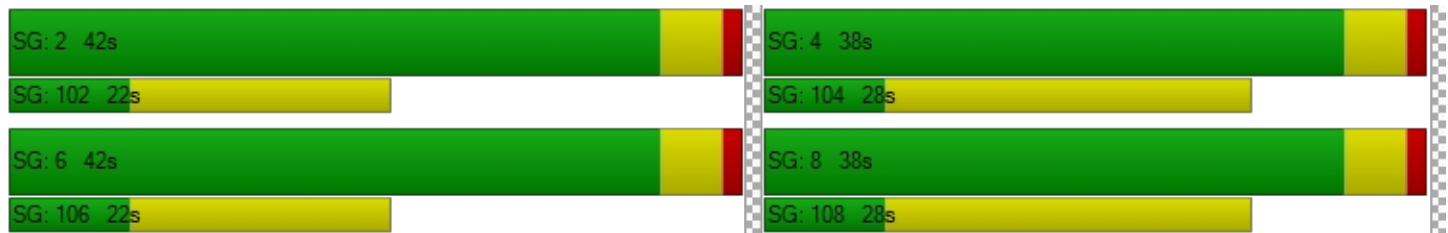
X, volume / capacity	0.14	0.58	0.14	0.38	0.54	0.54	0.36	0.42	0.24	0.28	0.71
d, Delay for Lane Group [s/veh]	20.82	14.17	10.00	28.35	14.53	14.65	35.74	19.86	18.36	27.54	24.19
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.56	6.66	1.09	1.73	6.17	6.11	1.31	3.87	1.74	1.52	7.79
50th-Percentile Queue Length [ft]	13.97	166.46	27.30	43.33	154.36	152.69	32.72	96.78	43.38	37.89	194.87
95th-Percentile Queue Length [veh]	1.01	10.89	1.97	3.12	10.25	10.16	2.36	6.97	3.12	2.73	12.37
95th-Percentile Queue Length [ft]	25.15	272.26	49.15	77.99	256.24	254.01	58.90	174.21	78.08	68.20	309.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.82	14.17	10.00	28.35	14.59	14.65	35.74	19.86	18.36	27.54	24.19	24.19
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.97			15.70			21.66			24.73		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.37											
Intersection LOS	B											
Intersection V/C	0.562											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.672

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	130	120	70	120	60	60	390	100	20	730	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	130	120	70	120	60	60	390	100	20	730	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	38	35	22	37	18	16	105	27	5	195	5
Total Analysis Volume [veh/h]	12	150	139	86	148	74	65	420	108	21	781	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	24	24	47	47	47	47	47
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.58	0.58	0.58	0.58	0.58
(v / s)_j Volume / Saturation Flow Rate	0.01	0.17	0.14	0.25	0.12	0.09	0.14	0.15	0.02	0.42
s, saturation flow rate [veh/h]	1245	1687	600	600	600	689	1900	1733	884	1887
c, Capacity [veh/h]	144	509	167	181	181	268	1108	1011	523	1100
d1, Uniform Delay [s]	36.95	23.51	22.74	25.86	22.22	24.30	8.11	8.15	10.69	12.08
k, delay calibration	0.11	0.11	0.11	0.23	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	1.00	2.46	17.03	1.48	2.14	0.53	0.60	0.14	4.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

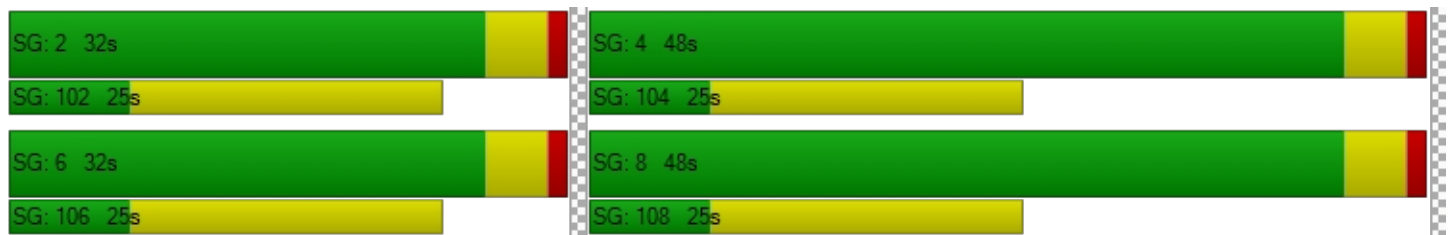
X, volume / capacity	0.08	0.57	0.52	0.82	0.41	0.24	0.25	0.25	0.04	0.73
d, Delay for Lane Group [s/veh]	37.19	24.51	25.20	42.89	23.70	26.44	8.64	8.76	10.83	16.33
Lane Group LOS	D	C	C	D	C	C	A	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	4.46	1.36	3.29	1.12	1.14	2.19	2.09	0.20	10.22
50th-Percentile Queue Length [ft]	5.73	111.43	33.91	82.20	27.97	28.42	54.86	52.26	5.09	255.56
95th-Percentile Queue Length [veh]	0.41	7.92	2.44	5.92	2.01	2.05	3.95	3.76	0.37	15.47
95th-Percentile Queue Length [ft]	10.32	197.99	61.04	147.96	50.35	51.15	98.74	94.07	9.15	386.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.19	24.51	24.51	25.20	42.89	23.70	26.44	8.68	8.76	10.83	16.33	16.33
Movement LOS	D	C	C	C	D	C	C	A	A	B	B	B
d_A, Approach Delay [s/veh]	25.01			33.34			10.64			16.19		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.49											
Intersection LOS	B											
Intersection V/C	0.672											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	770	120	60	830	420	70	500	130	90	630	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	770	120	60	830	420	70	500	130	90	630	40
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	213	33	16	216	109	19	132	34	25	173	11
Total Analysis Volume [veh/h]	44	851	133	62	863	436	74	529	138	99	691	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	64	64	73	65	65	38	27	27	38	28	28
g / C, Green / Cycle	0.61	0.53	0.53	0.61	0.54	0.54	0.31	0.22	0.22	0.31	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.27	0.09	0.36	0.38	0.08	0.18	0.19	0.10	0.20	0.20
s, saturation flow rate [veh/h]	554	1900	1790	700	1900	1618	953	1900	1652	1031	1900	1839
c, Capacity [veh/h]	300	1013	954	412	1021	870	252	421	366	269	444	430
d1, Uniform Delay [s]	15.25	17.78	17.86	11.67	20.01	20.74	31.71	44.37	45.11	32.17	43.75	43.88
k, delay calibration	0.50	0.50	0.50	0.14	0.50	0.50	0.07	0.10	0.13	0.04	0.12	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	1.74	1.89	0.21	3.46	4.88	0.39	3.55	8.30	0.31	4.50	5.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

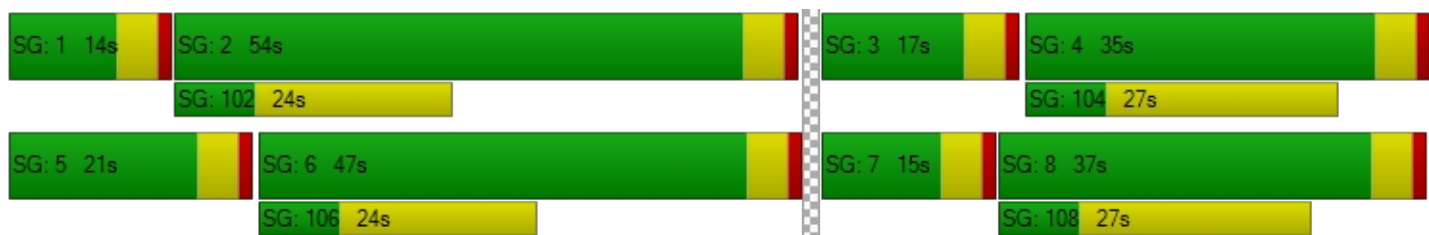
X, volume / capacity	0.15	0.50	0.50	0.15	0.67	0.71	0.29	0.82	0.88	0.37	0.84	0.85
d, Delay for Lane Group [s/veh]	16.28	19.53	19.75	11.88	23.47	25.61	32.11	47.92	53.41	32.48	48.25	49.11
Lane Group LOS	B	B	B	B	C	C	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.54	9.16	8.81	0.68	14.29	13.66	1.57	10.13	10.06	2.11	11.01	10.89
50th-Percentile Queue Length [ft]	13.59	229.10	220.22	16.90	357.17	341.46	39.18	253.29	251.60	52.83	275.13	272.27
95th-Percentile Queue Length [veh]	0.98	14.13	13.68	1.22	20.49	19.72	2.82	15.35	15.27	3.80	16.45	16.30
95th-Percentile Queue Length [ft]	24.46	353.22	341.91	30.41	512.14	492.98	70.53	383.79	381.67	95.09	411.15	407.58

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.28	19.62	19.75	11.88	23.92	25.61	32.11	49.83	53.41	32.48	48.64	49.11
Movement LOS	B	B	B	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	19.49			23.91			48.73			46.75		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	32.21											
Intersection LOS	C											
Intersection V/C	0.629											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	40	490	140	70	410	100	100	650	120	60	610	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	490	140	70	410	100	100	650	120	60	610	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	134	38	18	106	26	27	177	33	16	165	14
Total Analysis Volume [veh/h]	44	535	153	72	422	103	109	706	130	65	662	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	25	25	25	25	25	25
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.05	0.28	0.10	0.08	0.22	0.07	0.15	0.23	0.23	0.10	0.19	0.19
s, saturation flow rate [veh/h]	975	1900	1569	881	1900	1565	739	1900	1762	664	1900	1823
c, Capacity [veh/h]	434	960	793	356	960	791	234	690	640	195	690	662
d1, Uniform Delay [s]	15.97	11.92	9.49	19.33	11.01	9.17	27.78	18.34	18.45	28.75	17.54	17.60
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	2.33	0.54	1.27	1.46	0.34	0.54	0.34	0.39	0.37	0.23	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

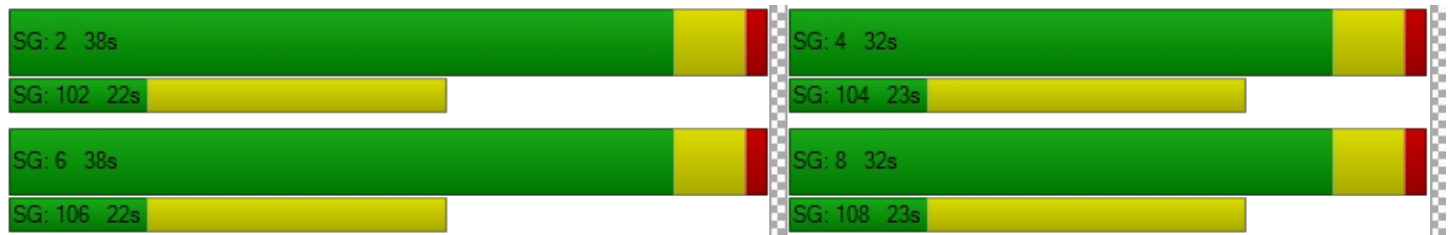
X, volume / capacity	0.10	0.56	0.19	0.20	0.44	0.13	0.47	0.62	0.64	0.33	0.53	0.53
d, Delay for Lane Group [s/veh]	16.44	14.25	10.03	20.61	12.47	9.51	28.32	18.68	18.84	29.11	17.77	17.85
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.50	5.47	1.22	0.97	3.93	0.79	1.71	5.33	5.08	1.02	4.30	4.21
50th-Percentile Queue Length [ft]	12.62	136.87	30.60	24.22	98.13	19.83	42.76	133.27	127.10	25.44	107.40	105.14
95th-Percentile Queue Length [veh]	0.91	9.31	2.20	1.74	7.07	1.43	3.08	9.12	8.78	1.83	7.69	7.57
95th-Percentile Queue Length [ft]	22.72	232.80	55.09	43.59	176.63	35.70	76.96	227.93	219.55	45.79	192.37	189.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.44	14.25	10.03	20.61	12.47	9.51	28.32	18.74	18.84	29.11	17.81	17.85
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.50			12.94			19.86			18.75		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.70											
Intersection LOS	B											
Intersection V/C	0.512											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	90	280	70	50	380	160	90	580	340	270	450	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	280	70	50	380	160	90	580	340	270	450	70
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	78	19	16	122	52	25	159	93	78	130	20
Total Analysis Volume [veh/h]	100	310	78	64	490	206	99	635	372	311	518	81
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.05	0.06	0.19	0.20	0.12	0.18	0.24	0.39	0.16	0.16
s, saturation flow rate [veh/h]	756	3618	1547	1069	1900	1661	828	3618	1554	799	1900	1792
c, Capacity [veh/h]	308	1570	672	480	825	721	350	1570	675	331	825	778
d1, Uniform Delay [s]	21.34	12.22	11.77	15.55	13.84	13.95	19.55	13.56	14.69	27.58	13.33	13.36
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.34	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.77	0.28	0.35	0.58	1.72	2.10	0.16	0.06	0.30	27.83	0.10	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

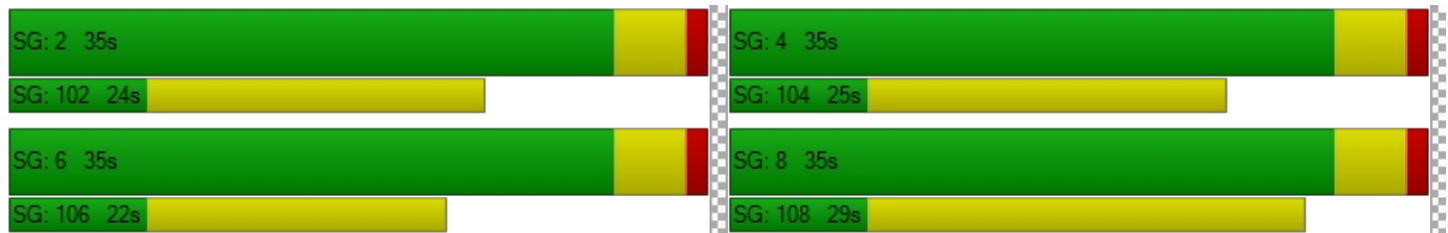
X, volume / capacity	0.32	0.20	0.12	0.13	0.44	0.46	0.28	0.40	0.55	0.94	0.37	0.38
d, Delay for Lane Group [s/veh]	24.12	12.51	12.12	16.13	15.56	16.05	19.71	13.62	14.99	55.40	13.43	13.47
Lane Group LOS	C	B	B	B	B	B	B	B	B	E	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.56	1.47	0.75	0.74	4.06	3.76	1.22	3.13	4.02	7.70	2.99	2.85
50th-Percentile Queue Length [ft]	39.01	36.83	18.74	18.39	101.47	94.12	30.60	78.34	100.46	192.60	74.65	71.37
95th-Percentile Queue Length [veh]	2.81	2.65	1.35	1.32	7.31	6.78	2.20	5.64	7.23	12.26	5.37	5.14
95th-Percentile Queue Length [ft]	70.23	66.30	33.74	33.10	182.65	169.42	55.09	141.01	180.82	306.40	134.37	128.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.12	12.51	12.12	16.13	15.68	16.05	19.71	13.62	14.99	55.40	13.45	13.47
Movement LOS	C	B	B	B	B	B	B	B	B	E	B	B
d_A, Approach Delay [s/veh]	14.82			15.82			14.63			27.79		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.60											
Intersection LOS	B											
Intersection V/C	0.588											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	130	640	50	120	560	50	90	900	370	240	340	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	640	50	120	560	50	90	900	370	240	340	80
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	170	13	32	151	13	26	263	108	67	95	22
Total Analysis Volume [veh/h]	138	679	53	130	604	54	105	1050	432	268	380	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	39	26	26	37	26	26	72	52	52	72	60	60
g / C, Green / Cycle	0.32	0.22	0.22	0.31	0.22	0.22	0.60	0.44	0.44	0.60	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.13	0.20	0.20	0.07	0.18	0.18	0.10	0.40	0.43	0.38	0.13	0.13
s, saturation flow rate [veh/h]	1077	1900	1839	1810	1900	1828	1053	1900	1679	713	1900	1760
c, Capacity [veh/h]	308	411	398	586	416	400	647	826	730	361	952	882
d1, Uniform Delay [s]	31.71	45.77	45.85	29.26	44.41	44.51	10.79	32.07	33.50	35.00	17.12	17.15
k, delay calibration	0.04	0.09	0.10	0.04	0.04	0.05	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	6.48	7.33	0.07	1.45	1.77	0.04	17.62	29.59	12.89	0.64	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.45	0.90	0.91	0.22	0.80	0.81	0.16	0.92	0.98	0.74	0.25	0.26
d, Delay for Lane Group [s/veh]	32.09	52.24	53.18	29.33	45.86	46.28	10.83	49.69	63.09	47.89	17.76	17.86
Lane Group LOS	C	D	D	C	D	D	B	D	E	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.17	12.06	11.87	2.94	10.09	9.87	1.19	24.40	25.99	4.62	3.98	3.75
50th-Percentile Queue Length [ft]	79.29	301.45	296.66	73.48	252.18	246.63	29.64	609.95	649.73	115.44	99.39	93.83
95th-Percentile Queue Length [veh]	5.71	17.75	17.52	5.29	15.30	15.02	2.13	32.50	34.35	8.14	7.16	6.76
95th-Percentile Queue Length [ft]	142.73	443.83	437.90	132.26	382.40	375.41	53.35	812.47	858.74	203.54	178.91	168.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.09	52.67	53.18	29.33	46.05	46.28	10.83	53.34	63.09	47.89	17.80	17.86
Movement LOS	C	D	D	C	D	D	B	D	E	D	B	B
d_A, Approach Delay [s/veh]	49.44			43.31			53.18			28.75		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	45.89											
Intersection LOS	D											
Intersection V/C	0.760											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	720	130	0	840	320	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	720	130	0	840	320	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	194	35	0	237	101	0
Total Analysis Volume [veh/h]	775	140	0	948	403	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	56	56
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.25	0.26	0.26	0.11
s, saturation flow rate [veh/h]	1810	1745	3618	3618
c, Capacity [veh/h]	501	483	2245	2245
d1, Uniform Delay [s]	31.46	31.77	8.76	7.27
k, delay calibration	0.33	0.35	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.70	22.79	0.58	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

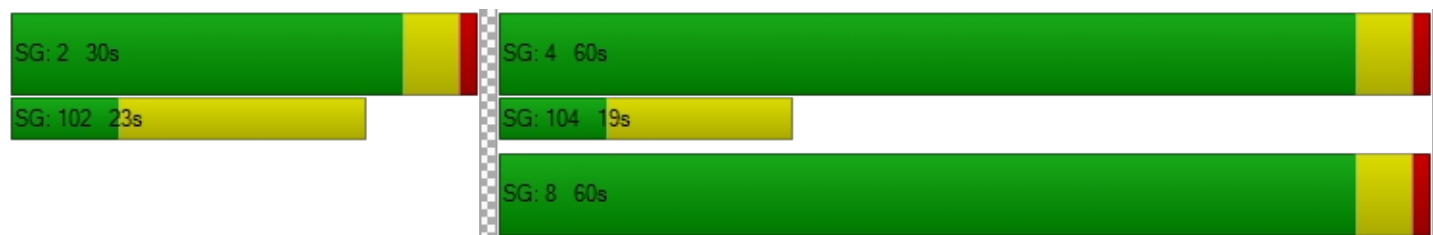
X, volume / capacity	0.92	0.94	0.42	0.18
d, Delay for Lane Group [s/veh]	49.17	54.55	9.34	7.45
Lane Group LOS	D	D	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	11.10	11.70	4.42	1.55
50th-Percentile Queue Length [ft]	277.45	292.54	110.59	38.80
95th-Percentile Queue Length [veh]	16.56	17.31	7.87	2.79
95th-Percentile Queue Length [ft]	414.04	432.79	196.82	69.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.36	54.55	0.00	9.34	7.45	0.00
Movement LOS	D	D		A	A	
d_A, Approach Delay [s/veh]	51.85		9.34		7.45	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	26.17					
Intersection LOS	C					
Intersection V/C	0.523					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	40	40	850	10	7	420	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	40	40	850	10	7	420	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	12	12	247	3	2	126	9
Total Analysis Volume [veh/h]	42	53	74	12	61	49	46	987	12	8	504	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	66	66	66	66	66
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.11	0.07	0.05	0.26	0.26	0.14	0.15
s, saturation flow rate [veh/h]	1605	1741	878	1900	1890	1900	1849
c, Capacity [veh/h]	305	320	663	1404	1397	1404	1366
d1, Uniform Delay [s]	35.35	34.17	5.35	4.15	4.16	3.57	3.58
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.28	0.20	0.71	0.71	0.31	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

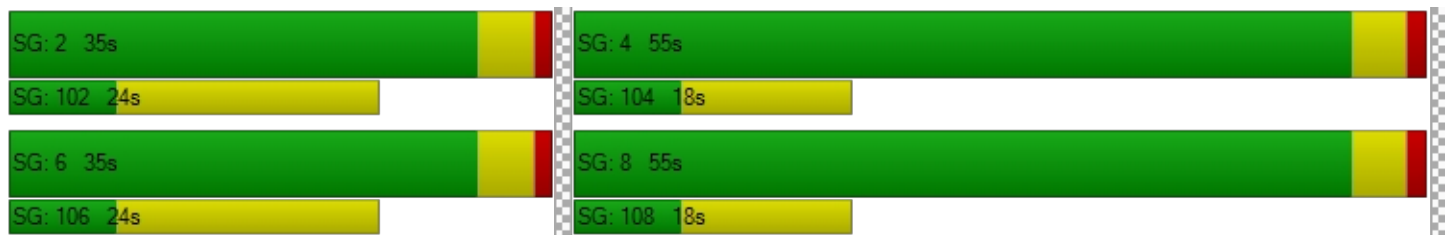
X, volume / capacity	0.55	0.38	0.07	0.36	0.36	0.19	0.20
d, Delay for Lane Group [s/veh]	35.94	34.45	5.56	4.86	4.87	3.87	3.91
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	2.37	0.31	2.76	2.75	1.27	1.28
50th-Percentile Queue Length [ft]	85.35	59.26	7.63	68.93	68.70	31.70	31.93
95th-Percentile Queue Length [veh]	6.14	4.27	0.55	4.96	4.95	2.28	2.30
95th-Percentile Queue Length [ft]	153.62	106.66	13.74	124.07	123.66	57.05	57.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.94	35.94	35.94	34.45	34.45	34.45	5.56	4.87	4.87	0.00	3.89	3.91
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.94			34.45			4.90			3.89		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.33											
Intersection LOS	A											
Intersection V/C	0.369											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	680	30	70	750	270	60	330	60	260	170	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	680	30	70	750	270	60	330	60	260	170	70
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	206	9	19	201	72	17	95	17	74	48	20
Total Analysis Volume [veh/h]	109	824	36	75	803	289	69	379	69	294	193	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	36	36	44	35	35	20	20	20	37	37	46
g / C, Green / Cycle	0.49	0.40	0.40	0.49	0.39	0.39	0.22	0.22	0.22	0.41	0.41	0.51
(v / s)_j Volume / Saturation Flow Rate	0.15	0.23	0.23	0.09	0.30	0.33	0.06	0.12	0.13	0.23	0.10	0.05
s, saturation flow rate [veh/h]	739	1900	1848	812	1900	1597	1160	1900	1745	1305	1900	1521
c, Capacity [veh/h]	322	758	737	397	731	614	231	418	384	546	778	781
d1, Uniform Delay [s]	17.78	21.10	21.18	14.03	24.40	25.35	36.21	31.16	31.35	19.59	17.48	11.25
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.83	3.12	3.30	0.08	8.12	13.74	0.27	0.42	0.50	0.31	0.06	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

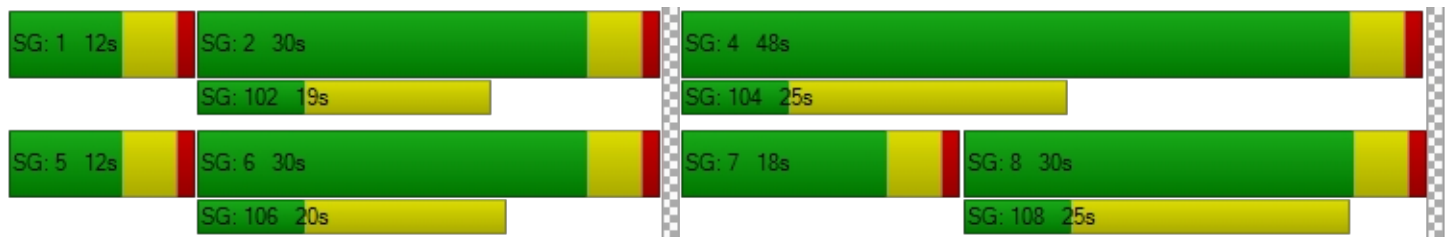
X, volume / capacity	0.34	0.57	0.58	0.19	0.78	0.85	0.30	0.55	0.57	0.54	0.25	0.10
d, Delay for Lane Group [s/veh]	20.61	24.22	24.48	14.12	32.51	39.09	36.48	31.58	31.85	19.90	17.55	11.27
Lane Group LOS	C	C	C	B	C	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.38	7.34	7.28	0.77	11.65	11.84	1.38	4.31	4.17	4.23	2.57	0.78
50th-Percentile Queue Length [ft]	34.39	183.43	182.12	19.16	291.14	296.03	34.62	107.86	104.17	105.63	64.26	19.52
95th-Percentile Queue Length [veh]	2.48	11.78	11.71	1.38	17.24	17.48	2.49	7.72	7.50	7.60	4.63	1.41
95th-Percentile Queue Length [ft]	61.90	294.49	292.78	34.49	431.05	437.11	62.32	193.03	187.50	189.91	115.67	35.13

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.61	24.34	24.48	14.12	34.42	39.09	36.48	31.68	31.85	19.90	17.55	11.27
Movement LOS	C	C	C	B	C	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	23.93			34.27			32.35			17.89		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	27.97											
Intersection LOS	C											
Intersection V/C	0.611											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	40	940	60	40	1120	20	70	60	40	30	160	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	940	60	40	1120	20	70	60	40	30	160	40
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	250	16	11	309	6	22	19	13	10	51	13
Total Analysis Volume [veh/h]	43	999	64	44	1235	22	88	75	50	38	204	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	19	19
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.10	0.28	0.28	0.08	0.33	0.33	0.20	0.17
s, saturation flow rate [veh/h]	448	1900	1849	539	1900	1886	1089	1705
c, Capacity [veh/h]	293	1229	1196	353	1229	1220	323	457
d1, Uniform Delay [s]	13.24	6.96	6.98	11.44	7.47	7.48	28.53	27.73
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	1.13	1.18	0.73	1.53	1.55	0.86	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

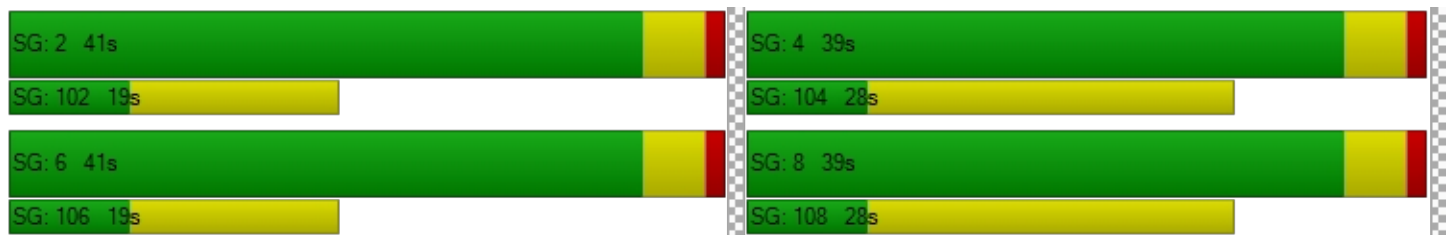
X, volume / capacity	0.15	0.44	0.44	0.12	0.51	0.51	0.66	0.64
d, Delay for Lane Group [s/veh]	14.29	8.09	8.15	12.17	9.00	9.02	29.39	28.29
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.52	3.94	3.88	0.47	5.00	4.99	3.80	4.92
50th-Percentile Queue Length [ft]	12.91	98.60	97.09	11.71	125.10	124.63	95.05	122.93
95th-Percentile Queue Length [veh]	0.93	7.10	6.99	0.84	8.67	8.65	6.84	8.55
95th-Percentile Queue Length [ft]	23.24	177.48	174.76	21.07	216.82	216.17	171.10	213.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.29	8.12	8.15	12.17	9.01	9.02	29.39	29.39	29.39	28.29	28.29	28.29
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.36			9.12			29.39			28.29		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.24											
Intersection LOS	B											
Intersection V/C	0.528											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	50	800	30	40	1130	160	220	70	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	50	800	30	40	1130	160	220	70	30
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	13	207	8	11	307	43	67	21	9
Total Analysis Volume [veh/h]	0	0	0	52	828	31	43	1227	174	270	86	37
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		85	85	85	85	85	85	26	26
g / C, Green / Cycle		0.71	0.71	0.71	0.71	0.71	0.71	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate		0.13	0.23	0.23	0.07	0.37	0.38	0.20	0.02
s, saturation flow rate [veh/h]		391	1900	1867	652	1900	1808	1776	1567
c, Capacity [veh/h]		261	1348	1325	455	1348	1283	379	335
d1, Uniform Delay [s]		16.31	6.54	6.55	9.99	8.08	8.16	46.32	37.93
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.29	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.71	0.63	0.64	0.41	1.49	1.62	23.06	0.05
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.20	0.32	0.32	0.09	0.53	0.54	0.94	0.11
d, Delay for Lane Group [s/veh]		18.02	7.17	7.19	10.41	9.57	9.78	69.38	37.98
Lane Group LOS		B	A	A	B	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.92	4.04	4.00	0.54	8.57	8.40	12.70	0.88
50th-Percentile Queue Length [ft]		23.05	101.07	100.04	13.39	214.17	209.97	317.44	21.97
95th-Percentile Queue Length [veh]		1.66	7.28	7.20	0.96	13.37	13.15	18.54	1.58
95th-Percentile Queue Length [ft]		41.50	181.93	180.08	24.11	334.18	328.80	463.53	39.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.02	7.18	7.19	10.41	9.66	9.78	69.38	69.38	37.98
Movement LOS				B	A	A	B	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			7.80			9.69			66.42		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	17.18											
Intersection LOS	B											
Intersection V/C	0.581											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	940	70	110	960	20	240	10	220	0	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	940	70	110	960	20	240	10	220	0	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	252	19	28	247	5	67	3	62	0	4	4
Total Analysis Volume [veh/h]	11	1009	75	113	988	21	269	11	247	0	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	81	81	81	21	21	5
g / C, Green / Cycle	0.58	0.58	0.67	0.67	0.67	0.17	0.17	0.04
(v / s)_j Volume / Saturation Flow Rate	0.31	0.31	0.17	0.27	0.27	0.15	0.16	0.02
s, saturation flow rate [veh/h]	1868	1665	679	1900	1883	1813	1577	1746
c, Capacity [veh/h]	1107	960	442	1277	1266	316	275	67
d1, Uniform Delay [s]	15.44	15.64	9.87	8.79	8.80	48.34	48.47	56.47
k, delay calibration	0.50	0.50	0.38	0.50	0.50	0.04	0.05	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.75	2.19	1.06	0.92	0.93	3.62	5.22	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

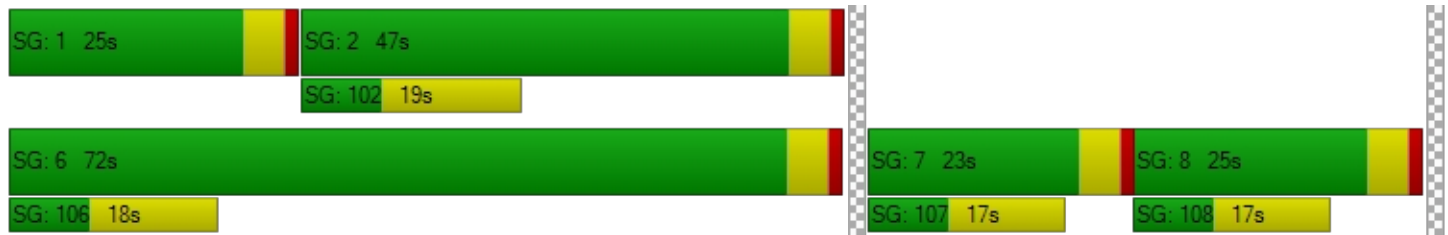
X, volume / capacity	0.52	0.54	0.26	0.40	0.40	0.89	0.90	0.48
d, Delay for Lane Group [s/veh]	17.18	17.83	10.92	9.72	9.73	51.96	53.69	58.40
Lane Group LOS	B	B	B	A	A	D	D	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.62	8.89	1.07	5.72	5.69	8.55	7.68	0.98
50th-Percentile Queue Length [ft]	240.40	222.24	26.79	143.09	142.23	213.67	191.92	24.48
95th-Percentile Queue Length [veh]	14.70	13.78	1.93	9.65	9.60	13.34	12.22	1.76
95th-Percentile Queue Length [ft]	367.54	344.48	48.23	241.18	240.02	333.53	305.52	44.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.18	17.47	17.83	10.92	9.73	9.73	51.96	51.96	53.69	58.40	58.40	58.40
Movement LOS	B	B	B	B	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	17.49			9.85			52.77			58.40		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	21.57											
Intersection LOS	C											
Intersection V/C	0.512											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┆			┆┆			┆┆			┆┆┆		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	610	60	130	650	10	160	430	210	20	170	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	610	60	130	650	10	160	430	210	20	170	20
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	158	16	35	177	3	42	113	55	5	45	5
Total Analysis Volume [veh/h]	0	632	62	142	709	11	168	452	221	21	182	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.37	0.15	0.38	0.14	0.38	0.03	0.10	0.01
s, saturation flow rate [veh/h]	1860	927	1894	1219	1784	777	1900	1560
c, Capacity [veh/h]	837	387	1061	377	602	80	641	526
d1, Uniform Delay [s]	21.71	15.49	14.03	29.85	29.80	44.98	21.84	20.02
k, delay calibration	0.50	0.30	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.32	1.61	3.50	0.31	73.69	0.63	0.09	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

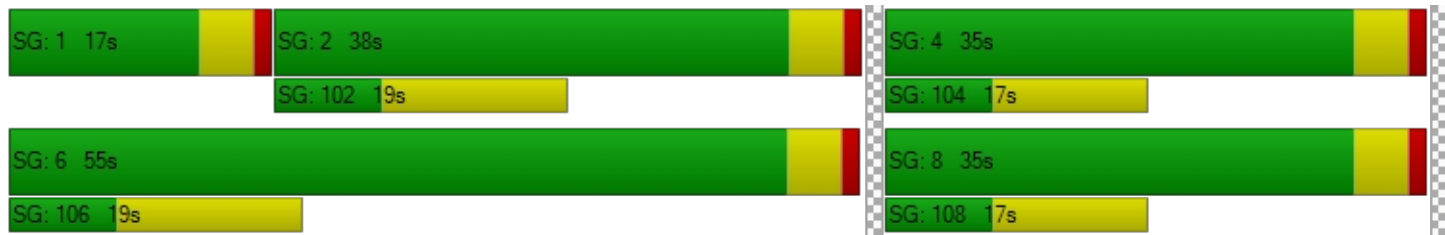
X, volume / capacity	0.83	0.37	0.68	0.45	1.12	0.26	0.28	0.04
d, Delay for Lane Group [s/veh]	31.03	17.10	17.52	30.15	103.49	45.61	21.93	20.03
Lane Group LOS	C	B	B	C	F	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	13.94	1.35	9.92	3.15	24.73	0.48	2.81	0.30
50th-Percentile Queue Length [ft]	348.45	33.81	248.09	78.82	618.36	12.08	70.33	7.44
95th-Percentile Queue Length [veh]	20.06	2.43	15.09	5.68	35.35	0.87	5.06	0.54
95th-Percentile Queue Length [ft]	501.52	60.86	377.25	141.88	883.81	21.74	126.60	13.39

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	31.03	31.03	17.10	17.52	17.52	30.15	103.49	103.49	45.61	21.93	20.03
Movement LOS		C	C	B	B	B	C	F	F	D	C	C
d_A, Approach Delay [s/veh]		31.03		17.45			88.84			23.97		
Approach LOS		C		B			F			C		
d_I, Intersection Delay [s/veh]	44.51											
Intersection LOS	D											
Intersection V/C	0.792											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	570	460	10	30	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	570	460	10	30	20
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	156	121	3	14	9
Total Analysis Volume [veh/h]	22	622	484	11	54	36
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	3
g / C, Green / Cycle	0.43	0.43	0.43	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.33	0.26	0.05
s, saturation flow rate [veh/h]	894	1900	1888	1726
c, Capacity [veh/h]	459	807	801	246
d1, Uniform Delay [s]	8.17	5.23	4.77	8.24
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.60	0.29	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

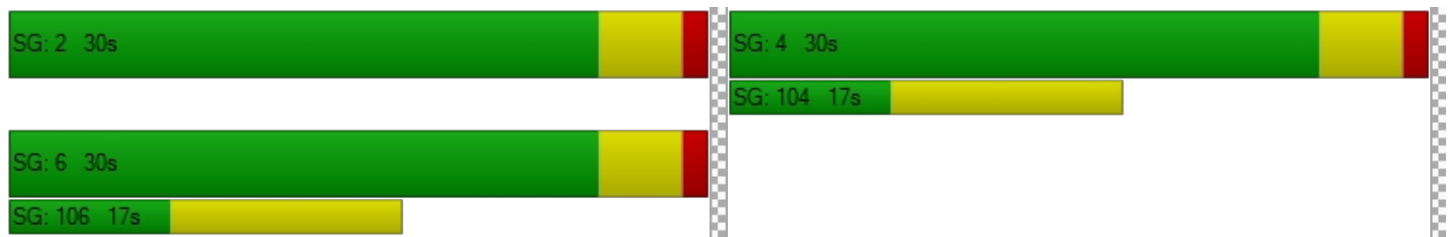
X, volume / capacity	0.05	0.77	0.62	0.37
d, Delay for Lane Group [s/veh]	8.18	5.83	5.06	8.58
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.80	0.55	0.21
50th-Percentile Queue Length [ft]	1.42	19.96	13.67	5.23
95th-Percentile Queue Length [veh]	0.10	1.44	0.98	0.38
95th-Percentile Queue Length [ft]	2.56	35.94	24.60	9.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.18	5.83	5.06	5.06	8.58	8.58
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.91		5.06		8.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.76					
Intersection LOS	A					
Intersection V/C	0.380					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	710	300	210	930	550	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	710	300	210	930	550	90
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	187	79	57	252	147	24
Total Analysis Volume [veh/h]	748	316	228	1008	588	96
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	67	67	17	88	22	22
g / C, Green / Cycle	0.56	0.56	0.14	0.74	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.28	0.32	0.13	0.28	0.17	0.06
s, saturation flow rate [veh/h]	1900	1687	1810	3618	3514	1478
c, Capacity [veh/h]	1058	939	255	2663	657	276
d1, Uniform Delay [s]	16.35	17.20	50.60	5.78	47.57	42.37
k, delay calibration	0.50	0.50	0.08	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.71	2.47	7.76	0.41	1.80	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.57	0.89	0.38	0.89	0.35
d, Delay for Lane Group [s/veh]	18.06	19.67	58.36	6.19	49.37	42.64
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	9.46	10.07	7.26	4.28	8.71	2.51
50th-Percentile Queue Length [ft]	236.50	251.64	181.53	107.06	217.64	62.63
95th-Percentile Queue Length [veh]	14.50	15.27	11.68	7.68	13.54	4.51
95th-Percentile Queue Length [ft]	362.60	381.72	292.01	191.90	338.62	112.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.53	19.67	58.36	6.19	49.37	42.64
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	18.87		15.82		48.43	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	24.38					
Intersection LOS	C					
Intersection V/C	0.609					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	20	370	190	60	340	10	220	590	40	20	580	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	370	190	60	340	10	220	590	40	20	580	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	100	51	17	97	3	57	152	10	5	155	3
Total Analysis Volume [veh/h]	22	399	205	68	387	11	227	608	41	21	621	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.02	0.21	0.13	0.07	0.20	0.01	0.20	0.17	0.18	0.03	0.17	0.17
s, saturation flow rate [veh/h]	1004	1900	1522	986	1900	1555	1144	1900	1830	777	1900	1874
c, Capacity [veh/h]	369	833	667	359	833	681	522	819	788	184	489	483
d1, Uniform Delay [s]	19.37	14.04	12.81	20.68	13.92	11.17	14.18	13.75	13.80	28.94	23.24	23.28
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	1.97	1.19	1.17	1.86	0.04	0.21	0.12	0.13	0.10	0.54	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

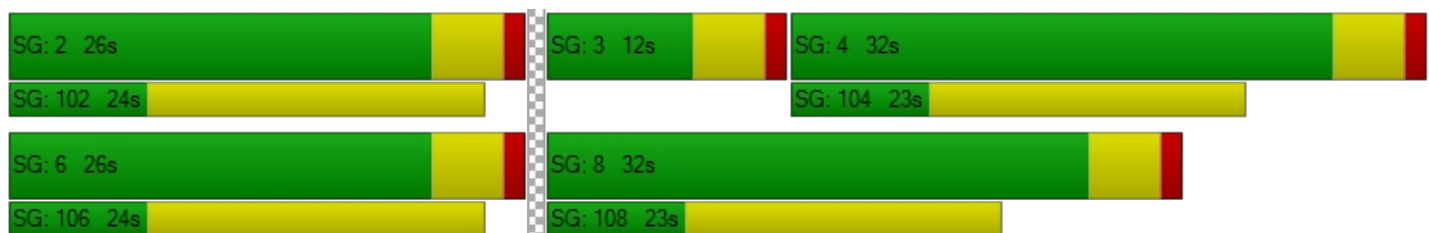
X, volume / capacity	0.06	0.48	0.31	0.19	0.46	0.02	0.43	0.40	0.41	0.11	0.65	0.65
d, Delay for Lane Group [s/veh]	19.68	16.01	14.01	21.85	15.79	11.21	14.40	13.87	13.93	29.04	23.78	23.84
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.28	4.41	2.08	0.94	4.24	0.09	2.16	3.28	3.22	0.32	4.47	4.46
50th-Percentile Queue Length [ft]	7.09	110.27	51.90	23.57	105.90	2.37	54.06	82.09	80.59	7.98	111.83	111.45
95th-Percentile Queue Length [veh]	0.51	7.85	3.74	1.70	7.61	0.17	3.89	5.91	5.80	0.57	7.94	7.92
95th-Percentile Queue Length [ft]	12.76	196.37	93.41	42.43	190.28	4.27	97.31	147.75	145.06	14.37	198.55	198.02

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.68	16.01	14.01	21.85	15.79	11.21	14.40	13.90	13.93	29.04	23.81	23.84
Movement LOS	B	B	B	C	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.48			16.56			14.03			23.98		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.31											
Intersection LOS	B											
Intersection V/C	0.468											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	340	360	90	450	110	250	890	80	40	720	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	340	360	90	450	110	250	890	80	40	720	30
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	91	97	27	134	33	64	227	20	11	190	8
Total Analysis Volume [veh/h]	54	365	387	107	535	131	255	907	82	42	759	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	53	8	27	27	11	64	77	5	58	58
g / C, Green / Cycle	0.05	0.20	0.44	0.07	0.22	0.22	0.09	0.53	0.64	0.04	0.48	0.48
(v / s)_j Volume / Saturation Flow Rate	0.03	0.10	0.26	0.04	0.18	0.19	0.07	0.25	0.05	0.02	0.21	0.21
s, saturation flow rate [veh/h]	1810	3618	1494	2796	1900	1724	3514	3618	1557	1810	1900	1865
c, Capacity [veh/h]	88	732	662	206	425	385	330	1919	994	80	913	896
d1, Uniform Delay [s]	55.96	42.45	25.14	56.06	44.18	44.49	53.11	17.65	8.27	56.13	20.48	20.50
k, delay calibration	0.04	0.04	0.26	0.04	0.04	0.04	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.20	1.96	0.76	1.43	1.99	1.47	0.84	0.01	2.00	1.52	1.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.50	0.59	0.52	0.81	0.84	0.77	0.47	0.08	0.53	0.44	0.44
d, Delay for Lane Group [s/veh]	58.50	42.64	27.11	56.82	45.61	46.47	54.58	18.49	8.29	58.14	22.00	22.06
Lane Group LOS	E	D	C	E	D	D	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.83	8.55	1.62	9.83	9.31	3.82	7.96	0.80	1.29	7.66	7.57
50th-Percentile Queue Length [ft]	41.67	120.77	213.77	40.46	245.68	232.81	95.58	198.90	19.92	32.26	191.49	189.24
95th-Percentile Queue Length [veh]	3.00	8.44	13.35	2.91	14.97	14.32	6.88	12.58	1.43	2.32	12.20	12.08
95th-Percentile Queue Length [ft]	75.00	210.88	333.67	72.83	374.21	357.92	172.04	314.55	35.85	58.07	304.96	302.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	42.64	27.11	56.82	45.92	46.47	54.58	18.49	8.29	58.14	22.03	22.06
Movement LOS	E	D	C	E	D	D	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	36.25			47.52			25.22			23.85		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.05											
Intersection LOS	C											
Intersection V/C	0.629											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T			T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	880	210	280	740	120	120	1250	10	80	930	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	880	210	280	740	120	120	1250	10	80	930	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	231	55	82	217	35	32	338	3	22	255	5
Total Analysis Volume [veh/h]	115	923	220	329	868	141	130	1354	11	88	1020	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	13	34	34	6	54	54	5	52	52
g / C, Green / Cycle	0.08	0.25	0.25	0.11	0.28	0.28	0.05	0.45	0.45	0.04	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.26	0.15	0.09	0.24	0.09	0.04	0.25	0.25	0.03	0.19	0.19
s, saturation flow rate [veh/h]	1810	3618	1497	3514	3618	1519	3514	3618	1890	3514	3618	1874
c, Capacity [veh/h]	141	905	374	385	1020	428	188	1616	844	141	1568	812
d1, Uniform Delay [s]	54.46	44.95	39.52	52.46	40.67	34.08	55.78	24.40	24.41	56.65	23.74	23.76
k, delay calibration	0.04	0.15	0.18	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	21.80	2.46	2.15	2.97	0.63	1.71	1.38	2.63	1.67	0.07	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	1.02	0.59	0.86	0.85	0.33	0.69	0.55	0.56	0.62	0.44	0.44
d, Delay for Lane Group [s/veh]	58.86	66.76	41.97	54.62	43.64	34.71	57.49	25.77	27.03	58.32	23.81	24.53
Lane Group LOS	E	F	D	D	D	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	16.89	6.30	4.85	12.05	3.24	1.98	9.56	10.30	1.35	6.78	7.21
50th-Percentile Queue Length [ft]	93.91	422.28	157.57	121.34	301.18	81.00	49.48	239.12	257.58	33.66	169.39	180.20
95th-Percentile Queue Length [veh]	6.76	23.91	10.42	8.47	17.74	5.83	3.56	14.64	15.57	2.42	11.04	11.61
95th-Percentile Queue Length [ft]	169.04	597.79	260.50	211.66	443.49	145.80	89.06	365.92	389.18	60.59	276.12	290.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	66.76	41.97	54.62	43.64	34.71	57.49	26.20	27.03	58.32	24.05	24.53
Movement LOS	E	F	D	D	D	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	61.70			45.40			28.93			26.73		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	40.57											
Intersection LOS	D											
Intersection V/C	0.622											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	170	20	210	30	10	60	150	1570	60	70	1210	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	20	210	30	10	60	150	1570	60	70	1210	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	8	80	9	3	17	38	396	15	20	354	44
Total Analysis Volume [veh/h]	258	30	318	34	11	69	151	1584	61	82	1417	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	12	67	67	7	62	62
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.10	0.56	0.56	0.06	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.19	0.02	0.20	0.02	0.05	0.08	0.30	0.30	0.05	0.29	0.30
s, saturation flow rate [veh/h]	1327	1900	1610	1398	1595	1810	3618	1860	1810	3618	1790
c, Capacity [veh/h]	338	515	436	391	432	178	2013	1035	104	1864	923
d1, Uniform Delay [s]	46.46	32.36	39.69	35.78	33.53	53.16	16.86	16.88	55.78	19.94	19.98
k, delay calibration	0.14	0.04	0.15	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	0.02	3.31	0.09	0.20	4.27	1.04	2.03	4.93	1.28	2.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

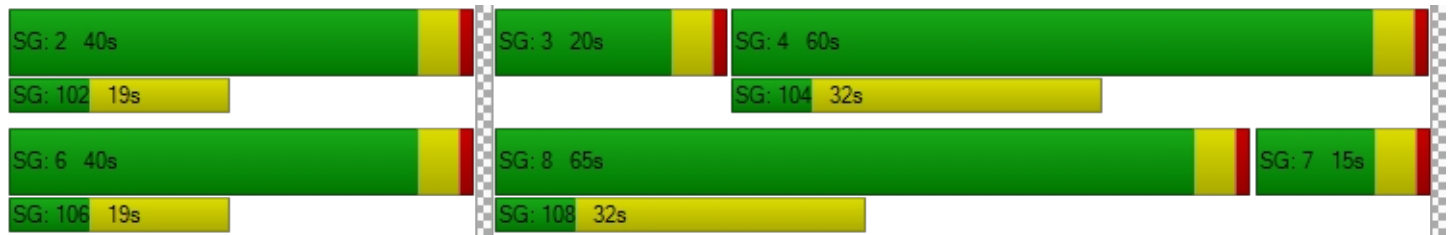
X, volume / capacity	0.76	0.06	0.73	0.09	0.19	0.85	0.54	0.54	0.79	0.57	0.57
d, Delay for Lane Group [s/veh]	51.18	32.37	43.00	35.88	33.73	57.43	17.90	18.91	60.70	21.22	22.56
Lane Group LOS	D	C	D	D	C	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.88	0.65	8.79	0.79	1.81	4.68	9.51	10.11	2.59	10.33	10.61
50th-Percentile Queue Length [ft]	196.94	16.19	219.77	19.69	45.19	117.10	237.87	252.83	64.79	258.35	265.36
95th-Percentile Queue Length [veh]	12.48	1.17	13.65	1.42	3.25	8.23	14.57	15.33	4.67	15.61	15.96
95th-Percentile Queue Length [ft]	312.02	29.15	341.33	35.45	81.34	205.83	364.34	383.22	116.63	390.14	398.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.18	32.37	43.00	35.88	33.73	33.73	57.43	18.22	18.91	60.70	21.55	22.56
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	45.95			34.37			21.54			23.58		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	26.23											
Intersection LOS	C											
Intersection V/C	0.576											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	430	1350	480	0	0	1460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	430	1350	480	0	0	1460
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	353	130	0	0	403
Total Analysis Volume [veh/h]	450	1412	519	0	0	1614
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	91	20	75
g / C, Green / Cycle	0.29	0.76	0.17	0.63
(v / s)_i Volume / Saturation Flow Rate	0.13	0.78	0.14	0.23
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1361	605	4336
d1, Uniform Delay [s]	34.19	14.63	48.55	10.81
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	34.72	1.41	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

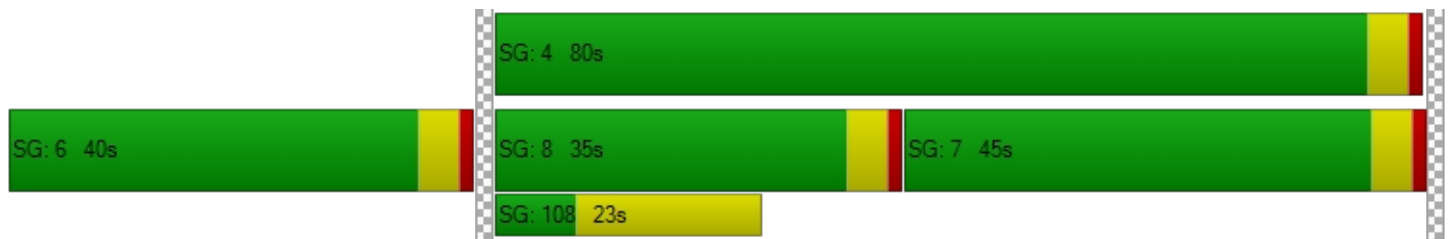
X, volume / capacity	0.43	1.04	0.86	0.37
d, Delay for Lane Group [s/veh]	34.29	49.35	49.95	11.06
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	5.04	18.03	7.65	5.08
50th-Percentile Queue Length [ft]	126.01	450.68	191.27	126.96
95th-Percentile Queue Length [veh]	8.72	25.80	12.19	8.77
95th-Percentile Queue Length [ft]	218.06	644.89	304.68	219.36

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.29	49.35	49.95	0.00	0.00	11.06
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	45.71		49.95		11.06	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	32.26					
Intersection LOS	C					
Intersection V/C	0.467					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.604

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	500	330	1230	700	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	500	330	1230	700	0
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	139	91	326	186	0
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	554	366	1305	743	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	30	81	115	115
g / C, Green / Cycle		0.25	0.25	0.67	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.15	0.23	0.37	0.20	0.20
s, saturation flow rate [veh/h]		3618	1576	3514	1900	1900
c, Capacity [veh/h]		901	393	2369	1827	1827
d1, Uniform Delay [s]		39.91	44.02	10.13	0.11	0.11
k, delay calibration		0.04	0.25	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.26	19.49	0.93	0.25	0.25
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.61	0.93	0.55	0.20	0.20
d, Delay for Lane Group [s/veh]		40.16	63.50	11.06	0.36	0.36
Lane Group LOS		D	E	B	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		7.27	12.67	8.59	0.13	0.13
50th-Percentile Queue Length [ft]		181.71	316.81	214.78	3.19	3.19
95th-Percentile Queue Length [veh]		11.69	18.51	13.40	0.23	0.23
95th-Percentile Queue Length [ft]		292.25	462.77	334.95	5.74	5.74

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.16	63.50	11.06	0.36	0.36
Movement LOS								D	E	B	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.45			7.18		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	20.28											
Intersection LOS	C											
Intersection V/C	0.604											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.371

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	└			+								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	20	760	28	30	650	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	20	760	28	30	650	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	5	208	8	9	205	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	22	833	30	38	821	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.24	0.24	0.25	0.25
s, saturation flow rate [veh/h]	1560	1380	1795	1729	1684	1729
c, Capacity [veh/h]	274	280	1373	1292	1291	1292
d1, Uniform Delay [s]	43.47	46.24	4.96	5.05	4.92	5.11
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.61	0.67	0.68	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

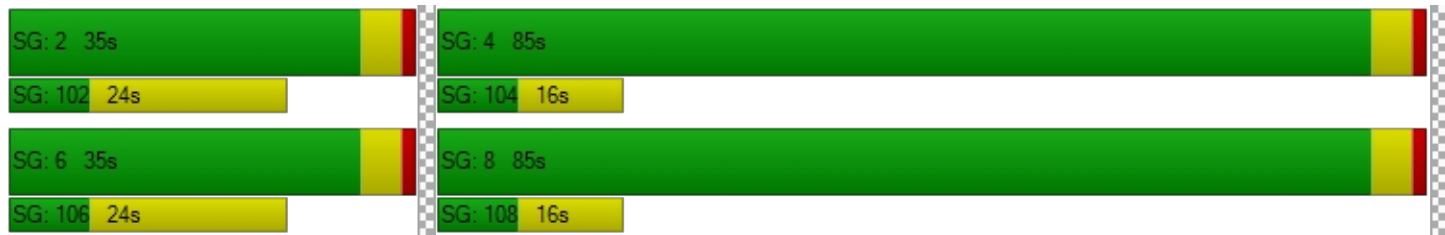
X, volume / capacity	0.36	0.59	0.32	0.32	0.33	0.34
d, Delay for Lane Group [s/veh]	43.77	46.97	5.57	5.71	5.60	5.81
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.36	3.30	3.26	3.47
50th-Percentile Queue Length [ft]	65.58	115.83	83.95	82.51	81.58	86.64
95th-Percentile Queue Length [veh]	4.72	8.16	6.04	5.94	5.87	6.24
95th-Percentile Queue Length [ft]	118.04	204.08	151.11	148.51	146.85	155.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.57	5.64	0.00	5.60	5.71	5.81
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		43.77		46.97			5.64			5.71		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	11.02											
Intersection LOS	B											
Intersection V/C	0.371											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.627

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	380	760	20	20	740	90	20	270	40	120	110	320
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	380	760	20	20	740	90	20	270	40	120	110	320
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	98	196	5	6	209	25	5	73	11	35	32	92
Total Analysis Volume [veh/h]	393	785	21	23	835	102	22	291	43	138	127	369
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	39	67	67	3	30	30	23	23	23	37	37	80
g / C, Green / Cycle	0.32	0.55	0.55	0.02	0.25	0.25	0.20	0.20	0.20	0.31	0.31	0.67
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.01	0.25	0.26	0.02	0.15	0.03	0.10	0.07	0.23
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1799	1263	1900	1478	1323	1900	1573
c, Capacity [veh/h]	1138	1053	1038	42	482	456	225	372	290	338	584	1054
d1, Uniform Delay [s]	30.86	15.13	15.16	57.96	44.63	44.76	46.10	45.78	39.93	32.54	30.81	8.54
k, delay calibration	0.50	0.50	0.50	0.04	0.42	0.43	0.04	0.08	0.04	0.04	0.04	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.83	1.06	1.09	4.16	35.54	41.16	0.07	2.79	0.09	0.29	0.07	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

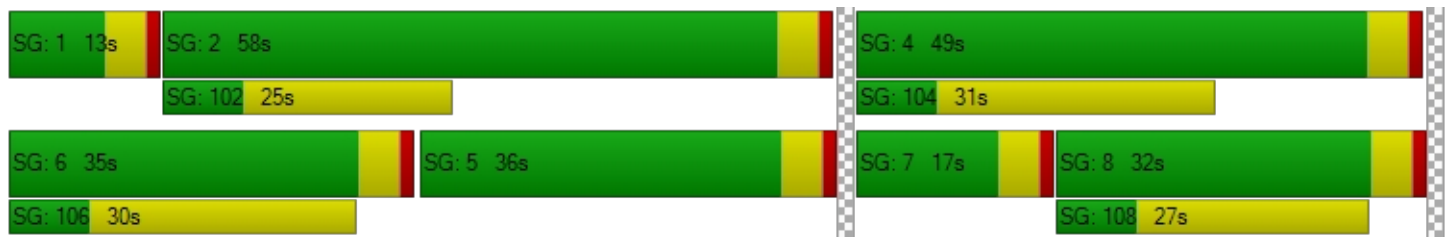
X, volume / capacity	0.35	0.38	0.39	0.55	0.99	1.01	0.10	0.78	0.15	0.41	0.22	0.35
d, Delay for Lane Group [s/veh]	31.69	16.20	16.25	62.12	80.17	85.91	46.17	48.57	40.02	32.83	30.87	8.78
Lane Group LOS	C	B	B	E	F	F	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.43	6.34	6.30	0.73	18.64	18.51	0.58	8.43	1.06	3.04	2.76	3.98
50th-Percentile Queue Length [ft]	110.67	158.54	157.53	18.36	465.93	462.76	14.58	210.69	26.40	76.09	68.97	99.57
95th-Percentile Queue Length [veh]	7.88	10.47	10.42	1.32	25.72	25.69	1.05	13.19	1.90	5.48	4.97	7.17
95th-Percentile Queue Length [ft]	196.93	261.79	260.46	33.05	642.93	642.15	26.24	329.71	47.52	136.97	124.15	179.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.69	16.22	16.25	62.12	82.63	85.91	46.17	48.57	40.02	32.83	30.87	8.78
Movement LOS	C	B	B	E	F	F	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.29			82.48			47.39			18.44		
Approach LOS	C			F			D			B		
d_I, Intersection Delay [s/veh]	42.32											
Intersection LOS	D											
Intersection V/C	0.627											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	170	670	700	60	80	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	670	700	60	80	50
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	175	182	16	22	14
Total Analysis Volume [veh/h]	178	701	727	62	90	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.72	0.72	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.21	0.37	0.38	0.04	0.05	0.04
s, saturation flow rate [veh/h]	849	1900	1900	1588	1810	1418
c, Capacity [veh/h]	678	1560	1358	1135	139	109
d1, Uniform Delay [s]	3.71	2.28	5.93	3.81	40.37	39.94
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	0.94	1.52	0.09	1.91	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

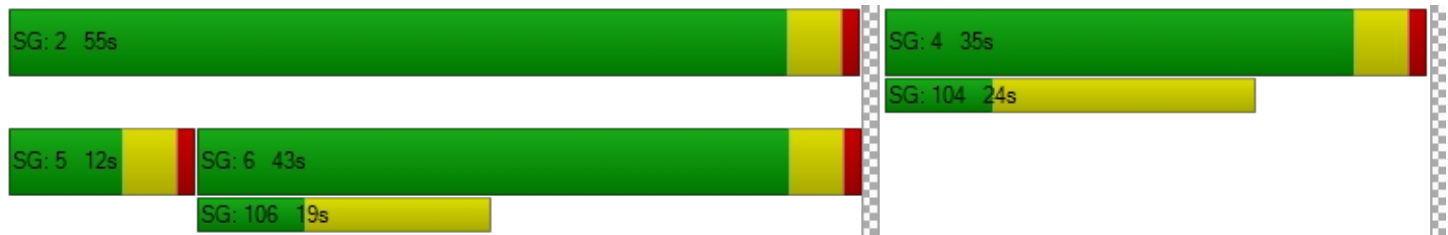
X, volume / capacity	0.26	0.45	0.54	0.05	0.65	0.52
d, Delay for Lane Group [s/veh]	4.65	3.22	7.45	3.90	42.28	41.35
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.40	1.65	5.02	0.27	1.97	1.21
50th-Percentile Queue Length [ft]	9.97	41.30	125.52	6.82	49.15	30.19
95th-Percentile Queue Length [veh]	0.72	2.97	8.70	0.49	3.54	2.17
95th-Percentile Queue Length [ft]	17.95	74.34	217.39	12.27	88.47	54.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.65	3.22	7.45	3.90	42.28	41.35
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.51		7.17		41.93	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.19					
Intersection LOS	A					
Intersection V/C	0.458					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	870	80	150	810	150	80	170	120	260	280	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	870	80	150	810	150	80	170	120	260	280	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	227	21	39	210	39	21	45	32	85	92	49
Total Analysis Volume [veh/h]	63	908	83	155	838	155	85	182	128	342	368	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	51	51	12	30	30	14	14	14	25	25	25
g / C, Green / Cycle	0.27	0.42	0.42	0.10	0.25	0.25	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.03	0.25	0.05	0.09	0.23	0.10	0.05	0.10	0.09	0.19	0.19	0.13
s, saturation flow rate [veh/h]	1810	3618	1547	1810	3618	1543	1810	1900	1448	1810	1900	1543
c, Capacity [veh/h]	495	1530	654	183	908	387	207	217	165	377	396	321
d1, Uniform Delay [s]	32.84	26.68	21.12	53.03	43.85	37.45	49.43	52.10	51.68	46.40	46.67	43.14
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.22	0.24	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	1.70	0.40	4.07	1.82	0.25	0.49	3.32	2.92	15.14	18.12	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.59	0.13	0.85	0.92	0.40	0.41	0.84	0.77	0.91	0.93	0.61
d, Delay for Lane Group [s/veh]	33.37	28.38	21.52	57.10	45.67	37.70	49.92	55.43	54.60	61.54	64.79	43.85
Lane Group LOS	C	C	C	E	D	D	D	E	D	E	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.45	10.12	1.49	5.03	13.01	4.07	2.39	5.52	3.85	11.41	12.62	5.32
50th-Percentile Queue Length [ft]	36.25	253.11	37.13	125.68	325.32	101.65	59.64	138.02	96.14	285.20	315.57	133.09
95th-Percentile Queue Length [veh]	2.61	15.34	2.67	8.70	18.93	7.32	4.29	9.37	6.92	16.95	18.45	9.11
95th-Percentile Queue Length [ft]	65.25	383.57	66.84	217.61	473.22	182.97	107.36	234.36	173.05	423.68	461.24	227.69

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.37	28.38	21.52	57.10	45.67	37.70	49.92	55.43	54.60	61.54	64.79	43.85
Movement LOS	C	C	C	E	D	D	D	E	D	E	E	D
d_A, Approach Delay [s/veh]	28.14			46.13			53.97			59.02		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	44.94											
Intersection LOS	D											
Intersection V/C	0.626											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	70	440	90	50	320	50	80	390	50	100	440	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	440	90	50	320	50	80	390	50	100	440	70
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	115	24	14	88	14	23	114	15	27	120	19
Total Analysis Volume [veh/h]	73	461	94	55	352	55	94	457	59	109	479	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.07	0.31	0.06	0.22	0.10	0.24	0.04	0.12	0.25	0.05
s, saturation flow rate [veh/h]	992	1817	865	1854	929	1900	1559	948	1900	1563
c, Capacity [veh/h]	404	846	295	864	246	724	594	260	724	595
d1, Uniform Delay [s]	16.51	12.33	20.42	10.97	24.96	15.15	11.96	24.61	15.39	12.10
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.98	3.95	1.40	1.84	0.36	0.34	0.03	0.40	0.39	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

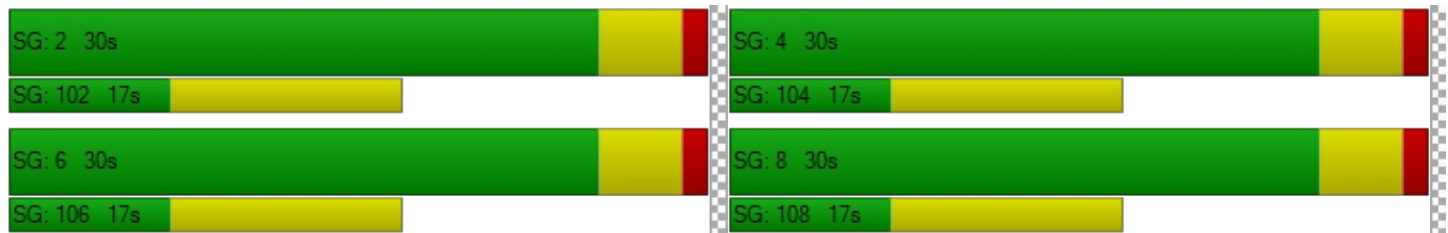
X, volume / capacity	0.18	0.66	0.19	0.47	0.38	0.63	0.10	0.42	0.66	0.13
d, Delay for Lane Group [s/veh]	17.49	16.28	21.81	12.82	25.32	15.49	11.99	25.00	15.78	12.13
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.84	5.93	0.73	3.59	1.21	4.40	0.45	1.39	4.69	0.58
50th-Percentile Queue Length [ft]	20.99	148.31	18.18	89.74	30.13	109.98	11.14	34.82	117.19	14.52
95th-Percentile Queue Length [veh]	1.51	9.93	1.31	6.46	2.17	7.84	0.80	2.51	8.24	1.05
95th-Percentile Queue Length [ft]	37.79	248.17	32.73	161.54	54.24	195.98	20.06	62.68	205.96	26.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.49	16.28	16.28	21.81	12.82	12.82	25.32	15.49	11.99	25.00	15.78	12.13
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.42			13.89			16.67			16.87		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.12											
Intersection LOS	B											
Intersection V/C	0.558											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.702

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	840	80	60	1090	80	80	390	100	110	520	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	840	80	60	1090	80	80	390	100	110	520	70
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	234	22	16	287	21	22	109	28	32	150	20
Total Analysis Volume [veh/h]	67	936	89	63	1146	84	90	437	112	127	600	81
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	60	49	49	60	49	49	51	39	39	51	40	40
g / C, Green / Cycle	0.50	0.41	0.41	0.50	0.41	0.41	0.42	0.33	0.33	0.42	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.10	0.27	0.28	0.08	0.33	0.33	0.09	0.23	0.07	0.11	0.32	0.05
s, saturation flow rate [veh/h]	660	1900	1825	742	1900	1831	1010	1900	1544	1130	1900	1564
c, Capacity [veh/h]	287	779	749	337	778	750	257	617	501	367	626	515
d1, Uniform Delay [s]	21.47	28.73	28.84	18.87	31.10	31.34	27.58	35.51	29.48	24.44	39.44	28.46
k, delay calibration	0.50	0.50	0.50	0.11	0.50	0.50	0.14	0.14	0.04	0.04	0.34	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	4.50	4.82	0.28	8.43	9.33	1.04	1.99	0.08	0.21	21.42	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.67	0.67	0.19	0.80	0.81	0.35	0.71	0.22	0.35	0.96	0.16
d, Delay for Lane Group [s/veh]	23.37	33.23	33.66	19.15	39.53	40.66	28.62	37.50	29.57	24.65	60.86	28.51
Lane Group LOS	C	C	C	B	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.10	12.83	12.55	0.91	17.14	17.05	1.60	11.33	2.35	2.22	20.58	1.65
50th-Percentile Queue Length [ft]	27.38	320.76	313.76	22.78	428.46	426.22	39.97	283.34	58.77	55.50	514.58	41.25
95th-Percentile Queue Length [veh]	1.97	18.71	18.36	1.64	23.93	23.82	2.88	16.85	4.23	4.00	28.02	2.97
95th-Percentile Queue Length [ft]	49.28	467.63	459.00	41.00	598.19	595.51	71.95	421.37	105.78	99.90	700.60	74.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.37	33.42	33.66	19.15	40.05	40.66	28.62	37.50	29.57	24.65	60.86	28.51
Movement LOS	C	C	C	B	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	32.82			39.07			34.86			51.93		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	39.30											
Intersection LOS	D											
Intersection V/C	0.702											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+T			+T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	20	140	100	20	110	40	80	530	20	50	590	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	140	100	20	110	40	80	530	20	50	590	30
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	50	36	7	39	14	21	138	5	14	167	8
Total Analysis Volume [veh/h]	29	200	143	28	154	56	83	552	21	57	667	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	82	82	82	82
g / C, Green / Cycle	0.24	0.24	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.22	0.17	0.11	0.30	0.07	0.37
s, saturation flow rate [veh/h]	1664	1396	757	1884	852	1880
c, Capacity [veh/h]	430	367	424	1289	511	1286
d1, Uniform Delay [s]	44.50	40.15	18.13	8.59	14.19	9.53
k, delay calibration	0.27	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.96	2.44	1.03	1.11	0.44	1.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

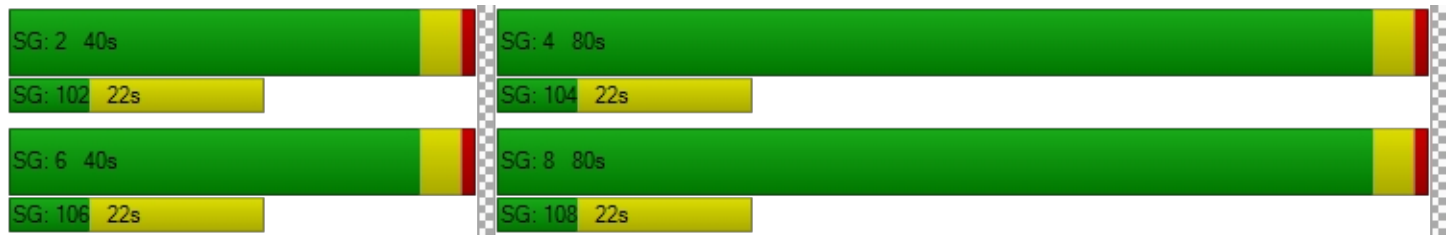
X, volume / capacity	0.86	0.65	0.20	0.44	0.11	0.55
d, Delay for Lane Group [s/veh]	56.46	42.58	19.16	9.70	14.64	11.20
Lane Group LOS	E	D	B	A	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	12.07	6.41	1.44	6.51	0.83	8.90
50th-Percentile Queue Length [ft]	301.66	160.31	36.09	162.80	20.75	222.38
95th-Percentile Queue Length [veh]	17.76	10.57	2.60	10.70	1.49	13.79
95th-Percentile Queue Length [ft]	444.08	264.14	64.96	267.43	37.34	344.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.46	56.46	56.46	42.58	42.58	42.58	19.16	9.70	9.70	14.64	11.20	11.20
Movement LOS	E	E	E	D	D	D	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	56.46			42.58			10.90			11.46		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.21											
Intersection LOS	C											
Intersection V/C	0.596											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	40	570	50	130	970	110	80	440	10	120	510	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	570	50	130	970	110	80	440	10	120	510	110
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	158	14	34	251	28	23	125	3	31	130	28
Total Analysis Volume [veh/h]	44	632	55	135	1005	114	91	500	11	122	519	112
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	54	54	65	57	57	45	33	33	45	35	35
g / C, Green / Cycle	0.55	0.45	0.45	0.55	0.47	0.47	0.38	0.28	0.28	0.38	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.07	0.18	0.19	0.15	0.30	0.31	0.09	0.26	0.01	0.11	0.27	0.08
s, saturation flow rate [veh/h]	641	1900	1832	911	1900	1793	1064	1900	1521	1110	1900	1448
c, Capacity [veh/h]	318	862	831	488	902	851	253	528	423	273	554	422
d1, Uniform Delay [s]	16.42	21.89	21.94	14.58	23.63	23.89	29.21	42.42	31.48	29.52	41.40	32.62
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.12	0.21	0.04	0.04	0.21	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	1.41	1.48	1.40	3.34	3.78	0.93	15.51	0.01	0.42	13.83	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.40	0.41	0.28	0.63	0.65	0.36	0.95	0.03	0.45	0.94	0.27
d, Delay for Lane Group [s/veh]	17.33	23.30	23.42	15.98	26.97	27.67	30.13	57.92	31.49	29.94	55.24	32.74
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	6.86	6.71	1.98	12.70	12.50	1.75	16.48	0.23	2.34	16.76	2.50
50th-Percentile Queue Length [ft]	15.82	171.46	167.70	49.46	317.53	312.45	43.84	412.09	5.83	58.44	418.89	62.53
95th-Percentile Queue Length [veh]	1.14	11.15	10.96	3.56	18.55	18.30	3.16	23.14	0.42	4.21	23.47	4.50
95th-Percentile Queue Length [ft]	28.48	278.83	273.89	89.04	463.65	457.39	78.91	578.55	10.49	105.19	586.72	112.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.33	23.35	23.42	15.98	27.28	27.67	30.13	57.92	31.49	29.94	55.24	32.74
Movement LOS	B	C	C	B	C	C	C	E	C	C	E	C
d_A, Approach Delay [s/veh]	23.00			26.10			53.24			47.79		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.20											
Intersection LOS	D											
Intersection V/C	0.630											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	50	260	100	60	320	40	40	440	60	20	600	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	260	100	60	320	40	40	440	60	20	600	80
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	73	28	18	98	12	11	126	17	6	176	24
Total Analysis Volume [veh/h]	56	291	112	74	393	49	46	502	68	24	706	94
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	35	35	35	35	35	35
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.06	0.17	0.08	0.08	0.23	0.03	0.07	0.29	0.05	0.03	0.41	0.07
s, saturation flow rate [veh/h]	905	1710	1371	976	1710	1425	678	1710	1365	816	1710	1264
c, Capacity [veh/h]	253	632	507	321	632	527	170	853	681	304	853	631
d1, Uniform Delay [s]	25.95	16.75	15.14	22.84	18.05	14.40	30.52	12.44	9.25	20.44	14.97	9.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.28	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	2.40	1.01	1.68	4.55	0.35	0.32	0.47	0.02	0.04	5.31	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

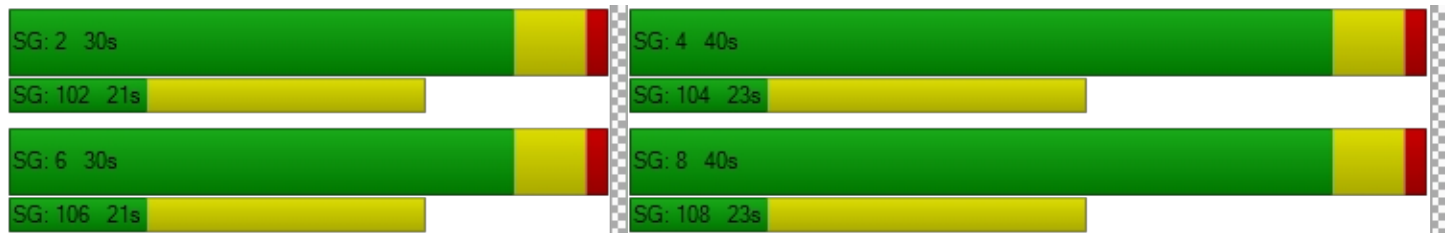
X, volume / capacity	0.22	0.46	0.22	0.23	0.62	0.09	0.27	0.59	0.10	0.08	0.83	0.15
d, Delay for Lane Group [s/veh]	27.96	19.16	16.14	24.52	22.60	14.75	30.84	12.91	9.27	20.48	20.28	9.54
Lane Group LOS	C	B	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.92	3.62	1.25	1.11	5.45	0.51	0.73	4.84	0.48	0.29	9.26	0.68
50th-Percentile Queue Length [ft]	23.05	90.49	31.34	27.68	136.31	12.85	18.19	121.07	12.03	7.23	231.62	17.08
95th-Percentile Queue Length [veh]	1.66	6.51	2.26	1.99	9.28	0.92	1.31	8.45	0.87	0.52	14.26	1.23
95th-Percentile Queue Length [ft]	41.49	162.87	56.41	49.83	232.04	23.12	32.75	211.30	21.65	13.01	356.42	30.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.96	19.16	16.14	24.52	22.60	14.75	30.84	12.91	9.27	20.48	20.28	9.54
Movement LOS	C	B	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.49			22.13			13.85			19.06		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.47											
Intersection LOS	B											
Intersection V/C	0.643											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	50	270	170	130	560	130	100	330	140	120	540	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	270	170	130	560	130	100	330	140	120	540	70
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	73	46	36	154	36	27	90	38	34	151	20
Total Analysis Volume [veh/h]	54	293	185	143	618	143	109	359	152	134	603	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	39	39	39	32	21	21	32	21	21
g / C, Green / Cycle	0.54	0.54	0.54	0.43	0.43	0.43	0.36	0.23	0.23	0.36	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.06	0.15	0.12	0.13	0.21	0.21	0.10	0.19	0.10	0.11	0.18	0.19
s, saturation flow rate [veh/h]	894	1900	1544	1086	1900	1741	1065	1900	1501	1262	1900	1789
c, Capacity [veh/h]	484	1019	828	421	811	743	372	446	353	394	450	424
d1, Uniform Delay [s]	11.26	11.45	11.01	24.41	18.68	18.78	21.11	32.54	29.36	21.44	32.10	32.25
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.06	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.47	0.71	0.62	2.18	2.07	2.35	0.25	1.31	0.31	0.19	1.07	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

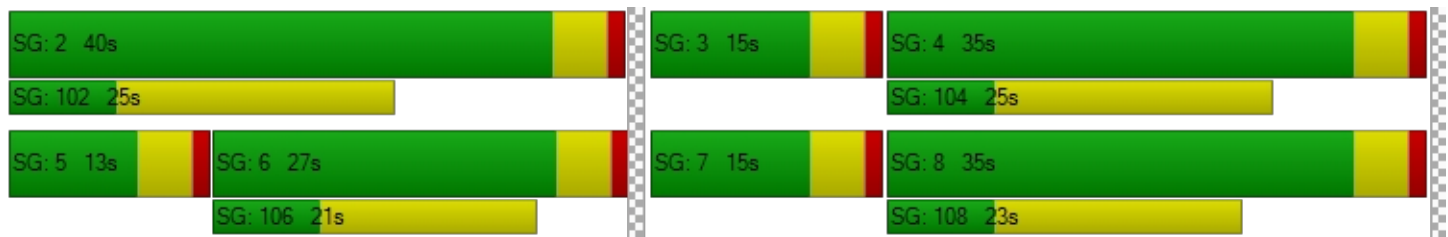
X, volume / capacity	0.11	0.29	0.22	0.34	0.48	0.50	0.29	0.80	0.43	0.34	0.77	0.79
d, Delay for Lane Group [s/veh]	11.73	12.16	11.63	26.59	20.75	21.14	21.36	33.85	29.67	21.63	33.16	33.49
Lane Group LOS	B	B	B	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.55	3.21	1.97	2.60	6.13	5.82	1.55	7.37	2.78	1.88	6.93	6.71
50th-Percentile Queue Length [ft]	13.67	80.37	49.30	65.04	153.28	145.48	38.66	184.14	69.56	47.12	173.14	167.68
95th-Percentile Queue Length [veh]	0.98	5.79	3.55	4.68	10.19	9.78	2.78	11.82	5.01	3.39	11.24	10.95
95th-Percentile Queue Length [ft]	24.61	144.66	88.73	117.08	254.80	244.39	69.58	295.42	125.21	84.82	281.04	273.86

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.73	12.16	11.63	26.59	20.89	21.14	21.36	33.85	29.67	21.63	33.30	33.49
Movement LOS	B	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.93			21.83			30.63			31.40		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.61											
Intersection LOS	C											
Intersection V/C	0.472											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	380	70	120	0	320	0	820	480	170	860	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	380	70	120	0	320	0	820	480	170	860	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	106	20	36	0	96	0	225	132	44	221	0
Total Analysis Volume [veh/h]	11	425	78	143	0	383	0	900	527	175	884	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	7	53	51	51	12	68
g / C, Green / Cycle	0.02	0.26	0.26	0.06	0.44	0.43	0.43	0.10	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.04	0.14	0.38	0.44	0.10	0.24
s, saturation flow rate [veh/h]	1810	1900	1653	3514	2818	1900	1617	1810	3618
c, Capacity [veh/h]	33	490	426	206	1239	811	690	187	2057
d1, Uniform Delay [s]	58.18	38.23	38.84	55.44	21.80	31.55	34.39	53.40	14.77
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.26	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.32	0.46	1.58	0.05	13.06	43.21	33.93	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

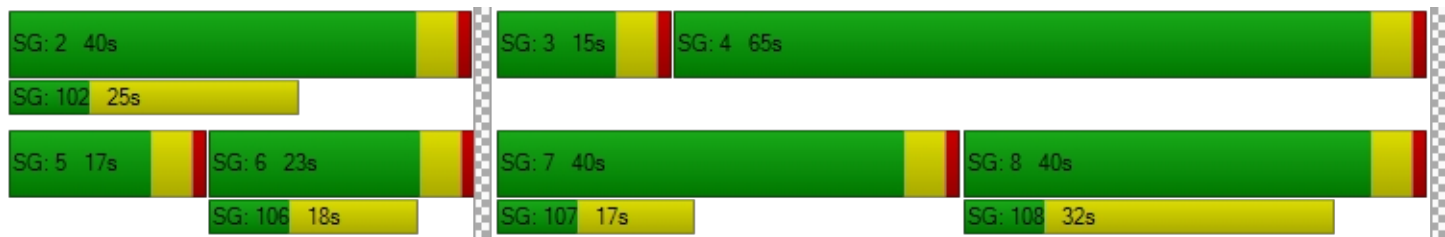
X, volume / capacity	0.33	0.52	0.58	0.69	0.31	0.88	1.03	0.94	0.43
d, Delay for Lane Group [s/veh]	60.32	38.55	39.31	57.02	21.85	44.61	77.59	87.34	15.43
Lane Group LOS	E	D	D	E	C	D	F	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.54	6.38	2.17	3.51	20.68	26.99	7.26	7.69
50th-Percentile Queue Length [ft]	8.75	163.41	159.41	54.25	87.75	517.00	674.64	181.39	192.24
95th-Percentile Queue Length [veh]	0.63	10.73	10.52	3.91	6.32	28.14	36.40	11.67	12.24
95th-Percentile Queue Length [ft]	15.75	268.23	262.94	97.65	157.96	703.45	910.02	291.83	305.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.85	39.31	57.02	0.00	21.85	0.00	51.45	77.59	87.34	15.43	0.00
Movement LOS	E	D	D	E		C		D	E	F	B	
d_A, Approach Delay [s/veh]	39.38			31.41			61.10			27.31		
Approach LOS	D			C			E			C		
d_I, Intersection Delay [s/veh]	43.36											
Intersection LOS	D											
Intersection V/C	0.728											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1030	20	40	1180	20	80	60	30	60	80	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1030	20	40	1180	20	80	60	30	60	80	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	285	6	11	314	5	27	20	10	18	23	3
Total Analysis Volume [veh/h]	33	1140	22	43	1255	21	107	81	40	70	94	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.07	0.31	0.31	0.09	0.34	0.34	0.16	0.12
s, saturation flow rate [veh/h]	440	1900	1884	491	1900	1887	1412	1462
c, Capacity [veh/h]	295	1255	1244	329	1255	1246	383	391
d1, Uniform Delay [s]	12.40	6.65	6.66	11.56	6.95	6.96	28.67	26.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.77	1.24	1.25	0.82	1.48	1.50	0.55	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

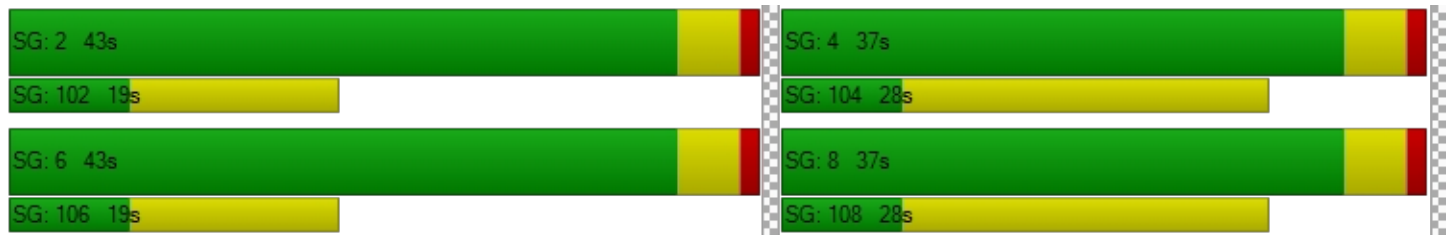
X, volume / capacity	0.11	0.46	0.47	0.13	0.51	0.51	0.59	0.45
d, Delay for Lane Group [s/veh]	13.16	7.89	7.92	12.38	8.44	8.46	29.23	27.18
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.38	4.17	4.15	0.47	4.81	4.79	3.93	2.83
50th-Percentile Queue Length [ft]	9.42	104.30	103.84	11.67	120.15	119.75	98.33	70.66
95th-Percentile Queue Length [veh]	0.68	7.51	7.48	0.84	8.40	8.38	7.08	5.09
95th-Percentile Queue Length [ft]	16.96	187.74	186.91	21.01	210.04	209.49	177.00	127.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.16	7.90	7.92	12.38	8.45	8.46	29.23	29.23	29.23	27.18	27.18	27.18
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.05			8.58			29.23			27.18		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.10											
Intersection LOS	B											
Intersection V/C	0.499											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	610	30	50	1110	40	50	130	10	80	140	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	610	30	50	1110	40	50	130	10	80	140	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	174	9	13	299	11	18	47	4	24	43	12
Total Analysis Volume [veh/h]	34	697	34	54	1195	43	72	188	14	97	170	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.07	0.19	0.20	0.07	0.33	0.33	0.19	0.23
s, saturation flow rate [veh/h]	456	1900	1857	732	1900	1870	1423	1381
c, Capacity [veh/h]	266	1144	1118	444	1144	1126	459	450
d1, Uniform Delay [s]	16.28	7.86	7.87	11.53	9.42	9.44	24.60	26.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.75	0.77	0.56	1.86	1.91	0.46	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.32	0.32	0.12	0.54	0.55	0.60	0.70
d, Delay for Lane Group [s/veh]	17.26	8.60	8.64	12.09	11.28	11.35	25.07	27.43
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.47	2.97	2.93	0.57	6.12	6.08	4.31	5.45
50th-Percentile Queue Length [ft]	11.72	74.20	73.31	14.28	153.07	152.05	107.69	136.23
95th-Percentile Queue Length [veh]	0.84	5.34	5.28	1.03	10.18	10.13	7.71	9.28
95th-Percentile Queue Length [ft]	21.09	133.55	131.96	25.71	254.53	253.16	192.79	231.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.26	8.62	8.64	12.09	11.32	11.35	25.07	25.07	25.07	27.43	27.43	27.43
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.01			11.35			25.07			27.43		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.01											
Intersection LOS	B											
Intersection V/C	0.558											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.657

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	980	30	20	1250	150	70	90	10	170	60	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	980	30	20	1250	150	70	90	10	170	60	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	282	9	5	333	40	20	26	3	46	16	5
Total Analysis Volume [veh/h]	34	1126	34	21	1333	160	81	104	12	184	65	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.58	0.58	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.10	0.31	0.31	0.04	0.40	0.41	0.25	0.01	0.19	0.01
s, saturation flow rate [veh/h]	358	1900	1877	491	1900	1811	740	1567	1300	1562
c, Capacity [veh/h]	193	1099	1086	279	1099	1048	291	480	477	479
d1, Uniform Delay [s]	22.42	10.24	10.25	15.84	11.80	11.97	28.91	19.38	23.79	19.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.98	1.83	1.86	0.53	3.52	3.95	2.24	0.01	0.33	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

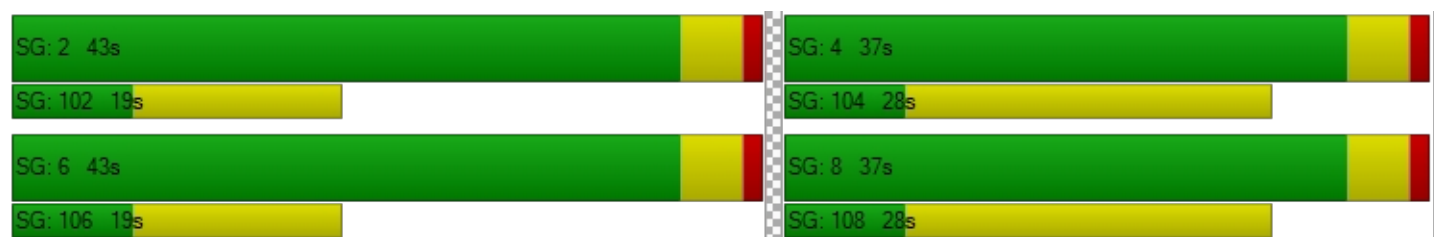
X, volume / capacity	0.18	0.53	0.53	0.08	0.69	0.70	0.63	0.02	0.52	0.05
d, Delay for Lane Group [s/veh]	24.41	12.08	12.12	16.36	15.32	15.92	31.15	19.39	24.12	19.52
Lane Group LOS	C	B	B	B	B	B	C	B	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.58	5.83	5.79	0.27	8.96	8.94	3.52	0.15	3.82	0.28
50th-Percentile Queue Length [ft]	14.62	145.87	144.80	6.83	223.95	223.54	87.91	3.74	95.62	6.90
95th-Percentile Queue Length [veh]	1.05	9.80	9.74	0.49	13.87	13.85	6.33	0.27	6.88	0.50
95th-Percentile Queue Length [ft]	26.32	244.90	243.47	12.29	346.66	346.14	158.25	6.73	172.11	12.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.41	12.10	12.12	16.36	15.58	15.92	31.15	31.15	19.39	24.12	24.12	19.52
Movement LOS	C	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.45			15.62			30.44			23.75		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.04											
Intersection LOS	B											
Intersection V/C	0.657											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1190	120	60	1400	180	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1190	120	60	1400	180	70
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	315	32	16	370	47	18
Total Analysis Volume [veh/h]	1262	127	64	1482	190	74
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	69	69	12	12
g / C, Green / Cycle	0.76	0.76	0.76	0.76	0.14	0.14
(v / s)_j Volume / Saturation Flow Rate	0.37	0.39	0.17	0.42	0.11	0.05
s, saturation flow rate [veh/h]	1863	1793	388	3547	1773	1557
c, Capacity [veh/h]	1420	1367	304	2704	240	211
d1, Uniform Delay [s]	4.05	4.14	9.58	4.36	37.62	35.27
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	1.35	1.57	0.80	5.82	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

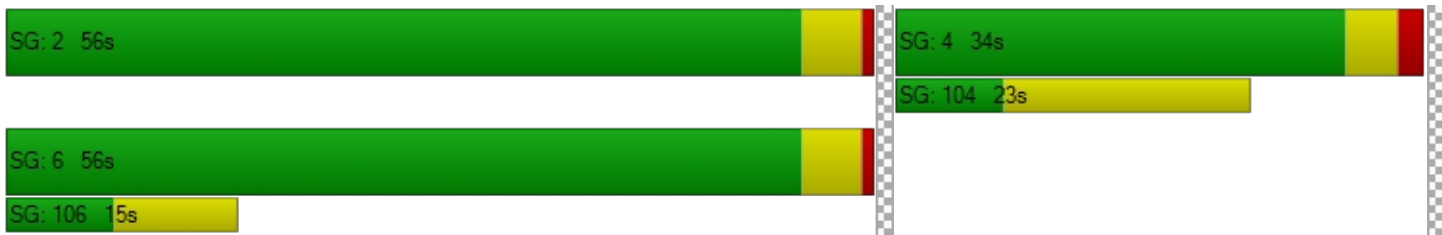
X, volume / capacity	0.49	0.51	0.21	0.55	0.79	0.35
d, Delay for Lane Group [s/veh]	5.25	5.49	11.15	5.16	43.44	36.27
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.60	3.71	0.72	4.18	4.32	1.49
50th-Percentile Queue Length [ft]	90.03	92.81	17.97	104.57	108.06	37.37
95th-Percentile Queue Length [veh]	6.48	6.68	1.29	7.53	7.73	2.69
95th-Percentile Queue Length [ft]	162.06	167.05	32.35	188.22	193.29	67.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.36	5.49	11.15	5.16	43.44	36.27
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	5.37		5.41		41.43	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.37					
Intersection LOS	A					
Intersection V/C	0.525					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.763

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	760	80	70	1340	100	110	290	50	30	200	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	760	80	70	1340	100	110	290	50	30	200	40
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	206	22	19	372	28	31	82	14	8	56	11
Total Analysis Volume [veh/h]	22	826	87	78	1490	111	125	328	57	34	225	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	29	22	22
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.24	0.25	0.13	0.42	0.43	0.33	0.18
s, saturation flow rate [veh/h]	322	1900	1821	620	1900	1835	1549	1673
c, Capacity [veh/h]	139	911	873	294	911	880	643	680
d1, Uniform Delay [s]	28.46	10.72	10.75	17.75	14.06	14.31	17.82	14.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.28	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.42	2.03	2.16	2.20	12.16	14.48	5.59	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

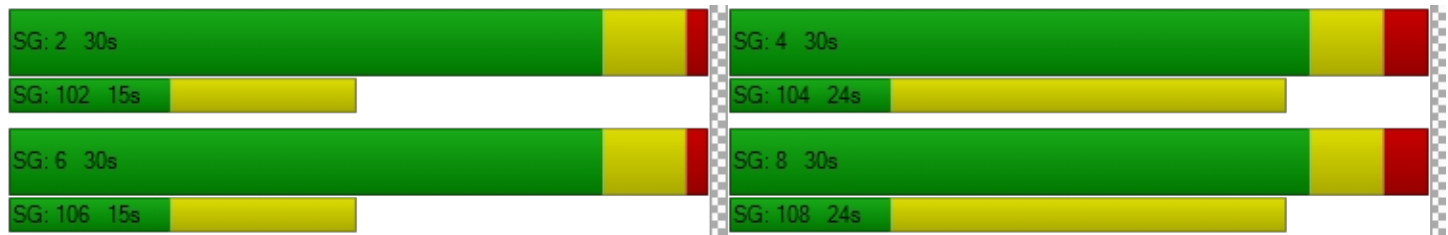
X, volume / capacity	0.16	0.51	0.51	0.27	0.88	0.90	0.79	0.45
d, Delay for Lane Group [s/veh]	30.88	12.75	12.91	19.95	26.22	28.78	23.42	14.56
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.40	4.07	3.97	0.99	11.17	11.68	6.67	2.74
50th-Percentile Queue Length [ft]	9.89	101.75	99.29	24.81	279.18	291.88	166.84	68.39
95th-Percentile Queue Length [veh]	0.71	7.33	7.15	1.79	16.65	17.28	10.91	4.92
95th-Percentile Queue Length [ft]	17.81	183.16	178.73	44.65	416.20	431.97	272.76	123.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.88	12.82	12.91	19.95	27.40	28.78	23.42	23.42	23.42	14.56	14.56	14.56
Movement LOS	C	B	B	B	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.25			27.14			23.42			14.56		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	21.69											
Intersection LOS	C											
Intersection V/C	0.763											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.564

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	170	120	30	210	20	70	410	50	10	350	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	170	120	30	210	20	70	410	50	10	350	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	49	35	9	63	6	21	122	15	3	94	5
Total Analysis Volume [veh/h]	23	198	140	36	251	24	83	488	59	11	376	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	34	34
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.56	0.56
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.03	0.13	0.02	0.36	0.22
s, saturation flow rate [veh/h]	1142	1701	1034	1863	1530	1726	1860
c, Capacity [veh/h]	277	491	193	538	442	1031	1099
d1, Uniform Delay [s]	22.78	18.94	26.85	17.54	15.42	8.91	7.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	1.72	0.46	0.63	0.05	2.70	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

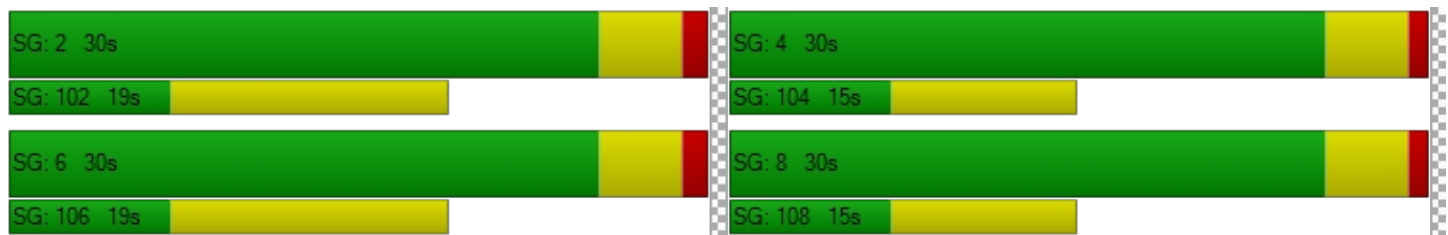
X, volume / capacity	0.08	0.69	0.19	0.47	0.05	0.61	0.37
d, Delay for Lane Group [s/veh]	22.91	20.66	27.31	18.17	15.47	11.61	8.46
Lane Group LOS	C	C	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.27	3.93	0.50	2.70	0.23	4.81	2.51
50th-Percentile Queue Length [ft]	6.87	98.24	12.39	67.52	5.63	120.29	62.66
95th-Percentile Queue Length [veh]	0.49	7.07	0.89	4.86	0.41	8.41	4.51
95th-Percentile Queue Length [ft]	12.36	176.84	22.30	121.54	10.14	210.22	112.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.91	20.66	20.66	27.31	18.17	15.47	11.61	11.61	11.61	8.46	8.46	8.46
Movement LOS	C	C	C	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	20.80			19.02			11.61			8.46		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	14.15											
Intersection LOS	B											
Intersection V/C	0.564											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

**Intersection Setup**

Name	S Ce			OI BI			W Olympic Blvd					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce			OI BI			W Olympic Blvd					
Base Volume Input [veh/h]	760	0	180	0	0	0	0	970	320	140	1450	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	760	0	180	0	0	0	0	970	320	140	1450	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	0	47	0	0	0	0	265	88	40	415	0
Total Analysis Volume [veh/h]	795	0	188	0	0	0	0	1062	350	160	1661	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	0	67	67	110	67	67	67
g / C, Green / Cycle	0.32	0.32	0.00	0.56	0.56	0.92	0.56	0.56	0.56
(v / s)_j Volume / Saturation Flow Rate	0.27	0.29	0.00	0.00	0.21	0.22	0.30	0.30	0.30
s, saturation flow rate [veh/h]	1810	1695	1863	298	5176	1595	540	3618	1900
c, Capacity [veh/h]	585	548	7	164	2887	1461	289	2018	1060
d1, Uniform Delay [s]	37.83	38.51	0.00	0.00	14.74	0.54	28.31	16.76	16.76
k, delay calibration	0.16	0.19	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.29	8.34	0.00	0.00	0.36	0.08	7.48	1.04	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

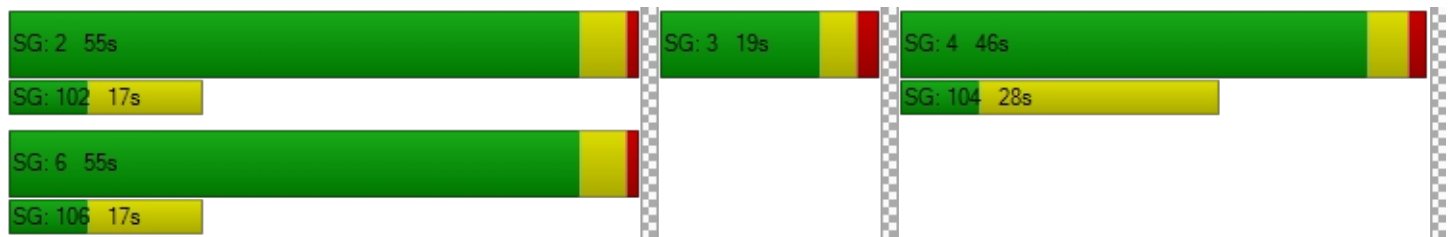
X, volume / capacity	0.85	0.89	0.00	0.00	0.37	0.24	0.55	0.54	0.54
d, Delay for Lane Group [s/veh]	43.12	46.85	0.00	0.00	15.10	0.63	35.79	17.80	18.73
Lane Group LOS	D	D	A	A	B	A	D	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	14.30	14.68	0.00	0.00	5.27	0.03	4.26	9.35	10.09
50th-Percentile Queue Length [ft]	357.41	366.96	0.00	0.00	131.83	0.85	106.51	233.63	252.27
95th-Percentile Queue Length [veh]	20.50	20.96	0.00	0.00	9.04	0.06	7.65	14.36	15.30
95th-Percentile Queue Length [ft]	512.43	524.04	0.00	0.00	225.97	1.53	191.13	358.97	382.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.53	46.85	46.85	0.00	0.00	0.00	0.00	15.10	0.63	35.79	18.12	18.73
Movement LOS	D	D	D	A	A	A	A	B	A	D	B	B
d_A, Approach Delay [s/veh]	44.97			0.00			11.51			19.67		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	22.84											
Intersection LOS	C											
Intersection V/C	0.588											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type: All-way stop  
 Analysis Method: HCM 2010  
 Analysis Period: 15 minutes

Delay (sec / veh): 14.7  
 Level Of Service: B  
 Volume to Capacity (v/c): 0.547

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	170	90	40	160	40	60	110	50	20	180	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	170	90	40	160	40	60	110	50	20	180	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	53	28	11	46	11	17	31	14	5	49	8
Total Analysis Volume [veh/h]	12	210	111	46	183	46	68	125	57	22	197	33
Pedestrian Volume [ped/h]	17			9			15			28		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	609	586	574	573
Degree of Utilization, x	0.55	0.47	0.44	0.44

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	3.31	2.50	2.19	2.23
95th-Percentile Queue Length [ft]	82.65	62.43	54.86	55.80
Approach Delay [s/veh]	15.82	14.48	14.02	14.13
Approach LOS	C	B	B	B
Intersection Delay [s/veh]	14.70			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	650	510	40	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	650	510	40	80	20
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	196	141	11	24	6
Total Analysis Volume [veh/h]	12	783	563	44	96	24
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	23	23	23	23	23
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	10	4
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.17
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.30	0.03	0.07
s, saturation flow rate [veh/h]	855	3618	1900	1576	1767
c, Capacity [veh/h]	412	1582	831	689	298
d1, Uniform Delay [s]	9.13	4.72	5.25	3.80	8.66
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.36	0.01	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

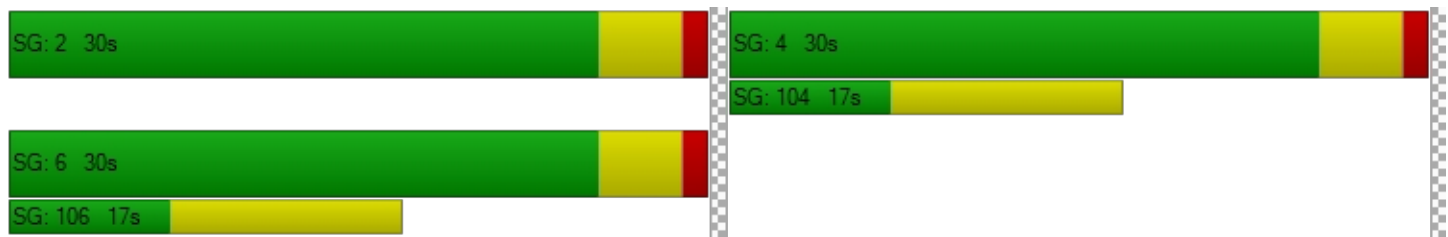
X, volume / capacity	0.03	0.49	0.68	0.06	0.40
d, Delay for Lane Group [s/veh]	9.14	4.80	5.62	3.82	8.98
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.39	0.68	0.04	0.38
50th-Percentile Queue Length [ft]	0.88	9.78	16.97	0.91	9.53
95th-Percentile Queue Length [veh]	0.06	0.70	1.22	0.07	0.69
95th-Percentile Queue Length [ft]	1.58	17.60	30.55	1.64	17.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.14	4.80	5.62	3.82	8.98	8.98
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.87		5.48		8.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.44					
Intersection LOS	A					
Intersection V/C	0.364					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Base Volume Input [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	300	3	3	412	184	161	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1201	10	10	1647	734	643	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		61	61	61	61	61	61	20	20
g / C, Green / Cycle		0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate		0.16	0.32	0.32	0.02	0.46	0.45	0.18	0.04
s, saturation flow rate [veh/h]		308	1900	1894	459	3618	1615	3514	1617
c, Capacity [veh/h]		194	1282	1279	305	2442	1090	782	360
d1, Uniform Delay [s]		21.23	6.97	6.97	11.95	8.71	8.70	33.22	28.41
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.03	1.25	1.26	0.20	1.51	3.33	2.23	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.25	0.47	0.47	0.03	0.67	0.67	0.82	0.20
d, Delay for Lane Group [s/veh]		24.26	8.22	8.23	12.15	10.23	12.03	35.45	28.68
Lane Group LOS		C	A	A	B	B	B	D	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		0.97	6.31	6.29	0.12	8.09	7.75	6.66	1.26
50th-Percentile Queue Length [ft]		24.30	157.63	157.26	2.88	202.19	193.74	166.43	31.39
95th-Percentile Queue Length [veh]		1.75	10.42	10.40	0.21	12.75	12.32	10.89	2.26
95th-Percentile Queue Length [ft]		43.75	260.58	260.09	5.19	318.78	307.88	272.22	56.49



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.26	8.23	8.23	12.15	10.23	12.03	35.45	28.68	28.68
Movement LOS				C	A	A	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	0.00			8.84			10.79			34.77		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.15											
Intersection LOS	B											
Intersection V/C	0.638											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	91.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

**Intersection Setup**

Name				I-10 WB ON-OFF RAMP			Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name				I-10 WB ON-OFF RAMP			Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	620	330	420	0	510	340	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	620	330	420	0	510	340	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	168	89	113	0	137	91	0	21
Total Analysis Volume [veh/h]	0	0	0	0	671	357	453	0	550	362	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.37	0.22	0.25	0.29	0.19	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.42	37.79	12.23	23.56	20.13
k, delay calibration		0.50	0.41	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		66.70	1.07	268.55	1.79	3.21	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

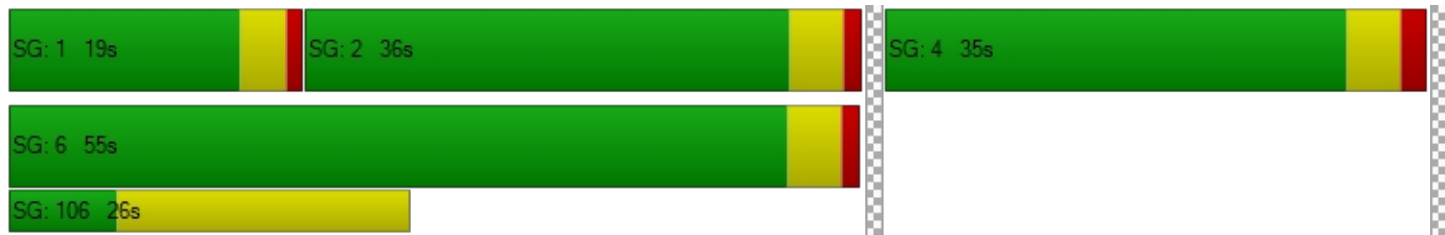
X, volume / capacity		1.10	0.40	1.56	0.52	0.55	0.15
d, Delay for Lane Group [s/veh]		96.53	12.50	306.35	14.02	26.77	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		24.32	4.25	27.91	6.81	6.58	1.29
50th-Percentile Queue Length [ft]		607.95	106.17	697.78	170.19	164.53	32.26
95th-Percentile Queue Length [veh]		34.48	7.63	43.52	11.09	10.79	2.32
95th-Percentile Queue Length [ft]		861.97	190.66	1088.09	277.16	269.71	58.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	96.53	12.50	306.35	0.00	14.02	26.77	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			67.35			146.05			25.62		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	91.68											
Intersection LOS	F											
Intersection V/C	0.812											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔			↔↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	90	130	100	140	170	10	70	950	80	0	860	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	130	100	140	170	10	70	950	80	0	860	120
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	37	28	44	54	3	18	250	21	0	230	32
Total Analysis Volume [veh/h]	101	146	113	176	214	13	74	1002	84	0	921	129
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	54	54	54	54	54
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.60	0.60	0.60	0.60	0.60
(v / s)_j Volume / Saturation Flow Rate	0.10	0.09	0.08	0.16	0.14	0.15	0.23	0.23	0.31	0.33
s, saturation flow rate [veh/h]	1025	1676	1335	1083	1656	481	3192	1593	1676	1586
c, Capacity [veh/h]	240	495	394	298	489	268	1923	960	1010	955
d1, Uniform Delay [s]	35.52	24.48	24.41	34.25	25.90	19.74	9.19	9.22	10.35	10.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.33	0.40	1.86	0.69	2.54	0.56	1.15	1.91	2.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.42	0.29	0.29	0.59	0.46	0.28	0.38	0.38	0.52	0.55
d, Delay for Lane Group [s/veh]	36.69	24.81	24.81	36.11	26.58	22.28	9.75	10.37	12.27	12.90
Lane Group LOS	D	C	C	D	C	C	A	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.12	2.40	1.86	3.74	3.97	1.27	3.44	3.64	5.93	6.14
50th-Percentile Queue Length [ft]	52.95	60.04	46.56	93.57	99.24	31.72	85.89	91.01	148.17	153.43
95th-Percentile Queue Length [veh]	3.81	4.32	3.35	6.74	7.14	2.28	6.18	6.55	9.92	10.20
95th-Percentile Queue Length [ft]	95.31	108.08	83.81	168.42	178.62	57.10	154.61	163.81	247.98	255.00



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.69	24.81	24.81	36.11	26.58	26.58	22.28	9.92	10.37	0.00	12.54	12.90
Movement LOS	D	C	C	D	C	C	C	A	B		B	B
d_A, Approach Delay [s/veh]	28.14			30.74			10.74			12.58		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.21											
Intersection LOS	B											
Intersection V/C	0.493											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	890	80	120	980	90	160	720	120	110	790	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	890	80	120	980	90	160	720	120	110	790	90
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	230	21	32	261	24	42	189	31	29	211	24
Total Analysis Volume [veh/h]	41	922	83	128	1044	96	168	756	126	118	845	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	43	34	34	43	36	36	38	28	28	38	26	26
g / C, Green / Cycle	0.48	0.37	0.37	0.48	0.40	0.40	0.42	0.31	0.31	0.42	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.06	0.26	0.06	0.16	0.29	0.07	0.19	0.24	0.24	0.14	0.25	0.26
s, saturation flow rate [veh/h]	690	3547	1503	809	3547	1448	893	1900	1768	859	1900	1804
c, Capacity [veh/h]	311	1324	561	371	1413	577	348	592	551	340	550	523
d1, Uniform Delay [s]	15.98	23.91	18.73	16.30	23.12	17.47	20.75	28.04	28.24	19.32	30.39	30.56
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.22	0.11	0.26	0.27
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	3.05	0.56	2.54	3.50	0.62	4.72	4.03	4.95	0.61	9.83	11.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

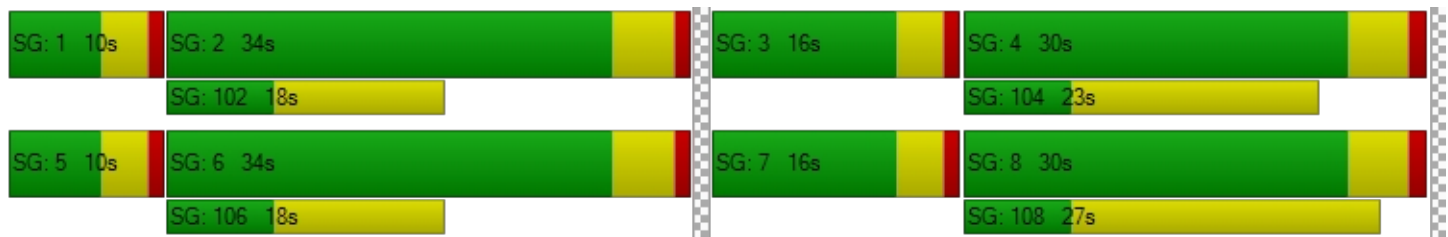
X, volume / capacity	0.13	0.70	0.15	0.35	0.74	0.17	0.48	0.76	0.78	0.35	0.87	0.88
d, Delay for Lane Group [s/veh]	16.17	26.95	19.28	18.83	26.62	18.09	25.46	32.07	33.19	19.93	40.22	42.22
Lane Group LOS	B	C	B	B	C	B	C	C	C	B	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.45	8.51	1.21	1.67	9.67	1.35	2.60	9.04	8.78	1.55	11.04	10.94
50th-Percentile Queue Length [ft]	11.15	212.86	30.21	41.84	241.78	33.71	65.05	225.92	219.47	38.69	275.95	273.59
95th-Percentile Queue Length [veh]	0.80	13.30	2.18	3.01	14.77	2.43	4.68	13.97	13.64	2.79	16.49	16.37
95th-Percentile Queue Length [ft]	20.07	332.50	54.38	75.31	369.28	60.67	117.10	349.17	340.94	69.65	412.17	409.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.17	26.95	19.28	18.83	26.62	18.09	25.46	32.52	33.19	19.93	41.09	42.22
Movement LOS	B	C	B	B	C	B	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	25.92			25.19			31.47			38.83		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	30.12											
Intersection LOS	C											
Intersection V/C	0.630											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	710	150	0	980	80	70	890	70	60	740	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	710	150	0	980	80	70	890	70	60	740	100
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	180	38	0	265	22	18	232	18	16	200	27
Total Analysis Volume [veh/h]	51	719	152	0	1060	87	73	928	73	65	800	108
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	48	48	48	48	48	48
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.10	0.24	0.25	0.22	0.22	0.12	0.26	0.05	0.11	0.24	0.25
s, saturation flow rate [veh/h]	494	1863	1716	3547	1745	619	3618	1524	599	1900	1780
c, Capacity [veh/h]	156	679	626	1293	636	307	1929	813	296	1013	949
d1, Uniform Delay [s]	35.95	23.94	24.09	23.16	23.27	20.46	13.19	10.30	20.61	12.97	13.07
k, delay calibration	0.11	0.12	0.12	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	1.18	1.46	0.43	0.92	1.82	0.86	0.22	1.70	1.49	1.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.66	0.67	0.59	0.60	0.24	0.48	0.09	0.22	0.46	0.47
d, Delay for Lane Group [s/veh]	37.16	25.12	25.55	23.60	24.18	22.28	14.05	10.52	22.31	14.46	14.73
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.09	7.92	7.54	6.43	6.54	1.22	5.70	0.72	1.08	5.65	5.49
50th-Percentile Queue Length [ft]	27.32	198.11	188.60	160.64	163.46	30.62	142.52	18.03	26.90	141.34	137.37
95th-Percentile Queue Length [veh]	1.97	12.54	12.05	10.58	10.73	2.20	9.62	1.30	1.94	9.55	9.34
95th-Percentile Queue Length [ft]	49.18	313.53	301.21	264.58	268.29	55.12	240.41	32.46	48.43	238.83	233.48



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.16	25.28	25.55	0.00	23.76	24.18	22.28	14.05	10.52	22.31	14.57	14.73
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.98			23.79			14.37			15.11		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.77											
Intersection LOS	B											
Intersection V/C	0.502											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	54.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	110	750	100	190	1180	300	160	940	160	280	810	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	750	100	190	1180	300	160	940	160	280	810	120
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	203	27	52	325	83	41	240	41	73	212	31
Total Analysis Volume [veh/h]	119	813	108	209	1301	331	163	960	163	293	847	125
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	42	59	10	44	61	12	37	52	12	37	37
g / C, Green / Cycle	0.08	0.35	0.49	0.09	0.36	0.50	0.10	0.30	0.43	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.07	0.16	0.07	0.06	0.26	0.22	0.09	0.27	0.11	0.17	0.23	0.08
s, saturation flow rate [veh/h]	1810	5074	1574	3445	5074	1520	1810	3618	1429	1774	3618	1515
c, Capacity [veh/h]	138	1785	781	301	1839	774	183	1101	621	184	1110	465
d1, Uniform Delay [s]	54.84	30.07	16.38	53.28	32.84	18.50	53.35	39.57	21.65	53.86	37.69	31.46
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.20	0.20	0.33	0.50	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.06	0.84	0.37	2.89	2.33	1.73	22.03	4.17	0.67	292.46	2.36	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.46	0.14	0.70	0.71	0.43	0.89	0.87	0.26	1.60	0.76	0.27
d, Delay for Lane Group [s/veh]	68.91	30.91	16.75	56.17	35.16	20.23	75.39	43.74	22.32	346.32	40.06	32.12
Lane Group LOS	E	C	B	E	D	C	E	D	C	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.07	6.11	1.67	3.19	11.11	6.07	5.93	13.77	3.01	20.40	11.43	2.81
50th-Percentile Queue Length [ft]	101.75	152.77	41.71	79.69	277.70	151.83	148.37	344.14	75.31	509.90	285.67	70.26
95th-Percentile Queue Length [veh]	7.33	10.16	3.00	5.74	16.57	10.11	9.93	19.85	5.42	32.34	16.97	5.06
95th-Percentile Queue Length [ft]	183.14	254.12	75.09	143.44	414.34	252.86	248.25	496.26	135.57	808.57	424.26	126.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	68.91	30.91	16.75	56.17	35.16	20.23	75.39	43.74	22.32	346.32	40.06	32.12
Movement LOS	E	C	B	E	D	C	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	33.79			34.86			45.04			110.21		
Approach LOS	C			C			D			F		
d_I, Intersection Delay [s/veh]	54.61											
Intersection LOS	D											
Intersection V/C	0.753											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	1000	520	550	1040
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1000	520	550	1040
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	257	134	150	284
Total Analysis Volume [veh/h]	0	0	1029	535	600	1135
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	43	43	38	85
g / C, Green / Cycle	0.48	0.48	0.42	0.95
(v / s)_i Volume / Saturation Flow Rate	0.32	0.38	0.38	0.36
s, saturation flow rate [veh/h]	3192	1422	1597	3192
c, Capacity [veh/h]	1525	680	670	3025
d1, Uniform Delay [s]	18.09	19.65	24.25	0.19
k, delay calibration	0.50	0.50	0.22	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.41	8.96	8.53	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.67	0.79	0.90	0.38
d, Delay for Lane Group [s/veh]	20.49	28.61	32.78	0.55
Lane Group LOS	C	C	C	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	8.22	10.40	12.54	0.15
50th-Percentile Queue Length [ft]	205.48	260.01	313.55	3.75
95th-Percentile Queue Length [veh]	12.92	15.69	18.35	0.27
95th-Percentile Queue Length [ft]	323.02	392.24	458.75	6.75



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	20.49	28.61	32.78	0.55
Movement LOS			C	C	C	A
d_A, Approach Delay [s/veh]	0.00		23.27		11.69	
Approach LOS	A		C		B	
d_I, Intersection Delay [s/veh]	17.18					
Intersection LOS	B					
Intersection V/C	0.752					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	30	1380	30	250	1130	60	150	370	100	210	270	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1380	30	250	1130	60	150	370	100	210	270	70
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	374	8	69	314	17	42	105	28	56	72	19
Total Analysis Volume [veh/h]	33	1496	33	278	1255	67	170	419	113	223	287	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	78	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.52	0.52	0.52	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.08	0.47	0.02	0.54	0.39	0.05	0.19	0.13	0.08	0.26	0.11	0.12
s, saturation flow rate [veh/h]	397	3192	1425	517	3192	1384	886	3192	1352	860	1676	1439
c, Capacity [veh/h]	156	1667	744	265	2030	880	219	966	409	207	508	436
d1, Uniform Delay [s]	43.39	32.18	17.50	54.77	16.38	10.44	60.36	41.94	39.75	64.34	40.98	41.47
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.11	0.11	0.36	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.08	8.03	0.11	69.15	1.43	0.17	9.99	0.31	0.36	75.98	0.44	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.90	0.04	1.05	0.62	0.08	0.78	0.43	0.28	1.08	0.37	0.40
d, Delay for Lane Group [s/veh]	46.48	40.21	17.62	123.92	17.80	10.61	70.35	42.24	40.11	140.32	41.42	42.07
Lane Group LOS	D	D	B	F	B	B	E	D	D	F	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.12	25.80	0.60	9.05	13.10	0.91	7.07	6.35	3.27	12.37	5.53	5.28
50th-Percentile Queue Length [ft]	28.04	644.93	14.94	226.25	327.50	22.65	176.76	158.73	81.66	309.24	138.36	132.10
95th-Percentile Queue Length [veh]	2.02	34.13	1.08	14.49	19.04	1.63	11.43	10.48	5.88	18.96	9.39	9.05
95th-Percentile Queue Length [ft]	50.47	853.18	26.89	362.21	475.89	40.76	285.78	262.05	146.99	474.11	234.81	226.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	46.48	40.21	17.62	123.92	17.80	10.61	70.35	42.24	40.11	140.32	41.65	42.07
Movement LOS	D	D	B	F	B	B	E	D	D	F	D	D
d_A, Approach Delay [s/veh]	39.87			35.94			48.71			79.38		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	45.04											
Intersection LOS	D											
Intersection V/C	0.810											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	70	960	50	120	1170	40	60	550	90	110	500	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	960	50	120	1170	40	60	550	90	110	500	60
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	244	13	32	314	11	15	141	23	28	127	15
Total Analysis Volume [veh/h]	71	976	51	129	1257	43	62	565	92	112	510	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	50	50	50	50	50
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.19	0.21	0.21	0.26	0.27	0.27	0.08	0.34	0.07	0.15	0.35
s, saturation flow rate [veh/h]	380	3192	1630	492	3192	1645	754	1676	1402	758	1642
c, Capacity [veh/h]	156	1474	753	209	1474	760	182	762	638	192	747
d1, Uniform Delay [s]	39.23	20.24	20.26	37.45	21.79	21.80	42.88	24.68	17.51	44.74	25.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.18	0.04	0.04	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	1.04	2.04	12.97	1.68	3.25	0.41	2.42	0.04	1.04	3.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.46	0.46	0.46	0.62	0.58	0.58	0.34	0.74	0.14	0.58	0.76
d, Delay for Lane Group [s/veh]	48.51	21.28	22.30	50.42	23.47	25.05	43.29	27.10	17.55	45.78	28.15
Lane Group LOS	D	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.18	6.05	6.42	4.03	8.28	8.89	1.57	12.27	1.37	3.02	12.71
50th-Percentile Queue Length [ft]	54.52	151.32	160.57	100.78	207.08	222.25	39.33	306.76	34.13	75.55	317.82
95th-Percentile Queue Length [veh]	3.93	10.09	10.58	7.26	13.00	13.78	2.83	18.02	2.46	5.44	18.56
95th-Percentile Queue Length [ft]	98.14	252.19	264.48	181.40	325.08	344.50	70.79	450.38	61.43	136.00	464.01

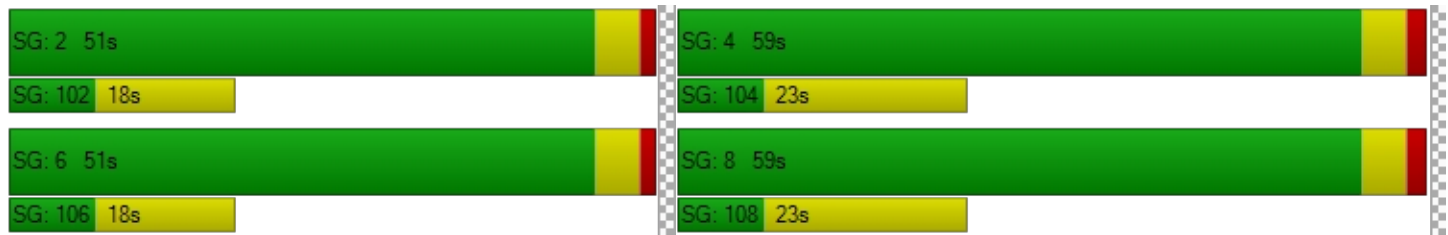


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	48.51	21.59	22.30	50.42	23.97	25.05	43.29	27.10	17.55	45.78	28.15	28.15
Movement LOS	D	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	23.36			26.39			27.27			31.04		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.51											
Intersection LOS	C											
Intersection V/C	0.617											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	100.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	350	320	70	620	60	660	1510	170	30	680	340
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	350	320	70	620	60	660	1510	170	30	680	340
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	100	91	21	189	18	176	402	45	8	190	95
Total Analysis Volume [veh/h]	46	399	365	85	754	73	703	1609	181	34	760	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	54	44	64	54	34	34	57	49	49	57	37	57
g / C, Green / Cycle	0.45	0.37	0.54	0.45	0.28	0.28	0.47	0.41	0.41	0.47	0.31	0.47
(v / s)_j Volume / Saturation Flow Rate	0.05	0.13	0.23	0.08	0.26	0.26	0.66	0.47	0.49	0.08	0.21	0.24
s, saturation flow rate [veh/h]	972	3080	1574	1062	1618	1562	1064	1900	1827	411	3618	1580
c, Capacity [veh/h]	354	1139	852	469	461	445	460	777	747	176	1104	753
d1, Uniform Delay [s]	23.51	27.40	16.43	20.52	41.50	41.55	39.49	35.50	35.50	28.21	36.72	21.65
k, delay calibration	0.11	0.11	0.50	0.11	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.18	1.57	0.18	19.69	20.78	247.95	82.61	101.60	2.44	3.52	2.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

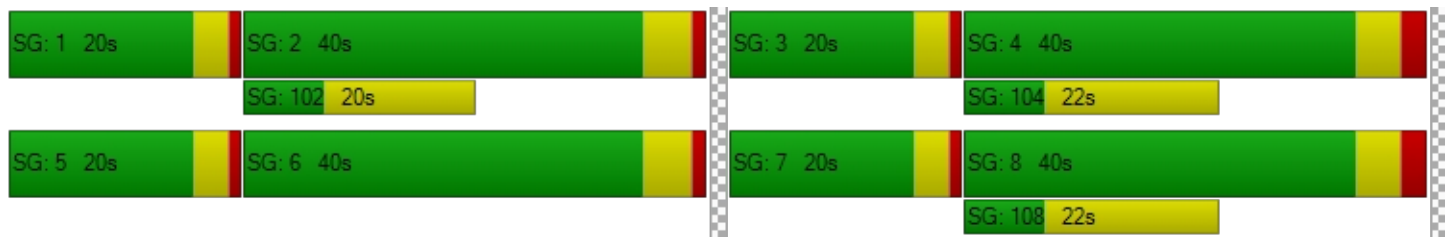
X, volume / capacity	0.13	0.35	0.43	0.18	0.91	0.91	1.53	1.15	1.20	0.19	0.69	0.50
d, Delay for Lane Group [s/veh]	23.68	27.58	18.01	20.70	61.18	62.34	287.44	118.10	137.10	30.65	40.24	24.06
Lane Group LOS	C	C	B	C	E	E	F	F	F	C	D	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.75	4.13	6.15	1.44	14.41	14.12	40.65	39.35	41.78	0.63	10.19	7.68
50th-Percentile Queue Length [ft]	18.82	103.24	153.82	36.07	360.34	352.88	1016.14	983.71	1044.43	15.71	254.76	191.93
95th-Percentile Queue Length [veh]	1.36	7.43	10.22	2.60	20.64	20.28	65.06	54.81	59.24	1.13	15.43	12.22
95th-Percentile Queue Length [ft]	33.88	185.82	255.51	64.93	516.00	506.92	1626.59	1370.18	1480.91	28.28	385.65	305.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.68	27.58	18.01	20.70	61.69	62.34	287.44	126.53	137.10	30.65	40.24	24.06
Movement LOS	C	C	B	C	E	E	F	F	F	C	D	C
d_A, Approach Delay [s/veh]	23.05			57.92			172.67			34.72		
Approach LOS	C			E			F			C		
d_I, Intersection Delay [s/veh]	100.71											
Intersection LOS	F											
Intersection V/C	0.872											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	80	80	50	90	60	70	840	20	20	750	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	80	80	50	90	60	70	840	20	20	750	20
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	24	24	14	26	17	19	232	6	5	200	5
Total Analysis Volume [veh/h]	35	94	94	57	103	69	77	926	22	21	798	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	61	61	61	61
g / C, Green / Cycle	0.21	0.21	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.17	0.19	0.36	0.36	0.27	0.27
s, saturation flow rate [veh/h]	1330	1177	1326	1511	1597	1507
c, Capacity [veh/h]	332	302	953	1033	1133	1030
d1, Uniform Delay [s]	32.81	33.97	6.42	7.07	6.08	6.19
k, delay calibration	0.11	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	4.86	1.89	1.94	0.97	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.67	0.76	0.50	0.53	0.38	0.40
d, Delay for Lane Group [s/veh]	35.18	38.82	8.32	9.01	7.05	7.33
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.66	5.20	3.72	4.67	3.10	3.02
50th-Percentile Queue Length [ft]	116.50	129.96	93.09	116.86	77.58	75.57
95th-Percentile Queue Length [veh]	8.20	8.94	6.70	8.22	5.59	5.44
95th-Percentile Queue Length [ft]	205.01	223.44	167.56	205.51	139.65	136.03



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.18	35.18	35.18	38.82	38.82	38.82	8.32	8.71	9.01	7.05	7.19	7.33
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.18			38.82			8.69			7.19		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.67											
Intersection LOS	B											
Intersection V/C	0.556											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type: Two-way stop  
 Analysis Method: HCM 2010  
 Analysis Period: 15 minutes

Delay (sec / veh): 25.5  
 Level Of Service: D  
 Volume to Capacity (v/c): 0.116

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗ ↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	590	510	0	20	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	590	510	0	20	30
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	155	140	0	6	9
Total Analysis Volume [veh/h]	0	621	561	0	23	34
Pedestrian Volume [ped/h]	6		5		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.12	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	25.49	12.75
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.39	0.22
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	9.65	5.47
d_A, Approach Delay [s/veh]	0.00		0.00		17.89	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.197

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	590	520	0	20	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	590	520	0	20	50
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	159	143	0	9	24
Total Analysis Volume [veh/h]	0	634	574	0	38	94
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.20	0.20
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	28.18	14.32
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.71	0.72
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	17.74	18.00
d_A, Approach Delay [s/veh]	0.00		0.00		18.31	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.80					
Intersection LOS	D					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	260	10	10	210	30	10	0	0	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	260	10	10	210	30	10	0	0	10	10	10
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	74	3	3	55	8	10	0	0	3	3	3
Total Analysis Volume [veh/h]	23	295	11	10	220	31	40	0	0	14	14	14
Pedestrian Volume [ped/h]	33			30			12			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	817	815	656	699
Degree of Utilization, x	0.40	0.32	0.06	0.06

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	1.96	1.39	0.19	0.19
95th-Percentile Queue Length [ft]	48.96	34.66	4.86	4.78
Approach Delay [s/veh]	10.34	9.49	8.84	8.48
Approach LOS	B	A	A	A
Intersection Delay [s/veh]	9.80			
Intersection LOS	A			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	20	250	0	10	220	30	10	10	10	20	0	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	250	0	10	220	30	10	10	10	20	0	30
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	78	0	3	58	8	7	7	7	8	0	12
Total Analysis Volume [veh/h]	25	312	0	11	233	32	29	29	29	31	0	46
Pedestrian Volume [ped/h]	8			11			6			25		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	766	767	674	690
Degree of Utilization, x	0.44	0.36	0.13	0.11

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.26	1.64	0.44	0.37
95th-Percentile Queue Length [ft]	56.55	41.12	11.05	9.37
Approach Delay [s/veh]	11.34	10.32	9.13	8.87
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.49			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	61.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.137

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↕↔			↕↔			↔↕↔			↔↕↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	50	80	250	50	150	70	380	430	70	20	400	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	80	250	50	150	70	380	430	70	20	400	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	24	75	16	48	22	104	118	19	6	114	11
Total Analysis Volume [veh/h]	60	96	300	64	192	89	416	471	77	23	457	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	30	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.33	0.56	0.56	0.03	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.67	0.20	0.60	0.06	0.23	0.25	0.05	0.02	0.24	0.04
s, saturation flow rate [veh/h]	234	1534	425	1505	1810	1900	1449	1509	1900	1095
c, Capacity [veh/h]	126	977	179	456	604	1064	811	52	495	286
d1, Uniform Delay [s]	31.27	7.37	28.08	23.21	25.93	11.58	9.20	42.59	32.37	25.66
k, delay calibration	0.50	0.08	0.50	0.04	0.50	0.50	0.50	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	156.08	0.13	223.19	0.08	6.31	1.34	0.23	2.18	11.62	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

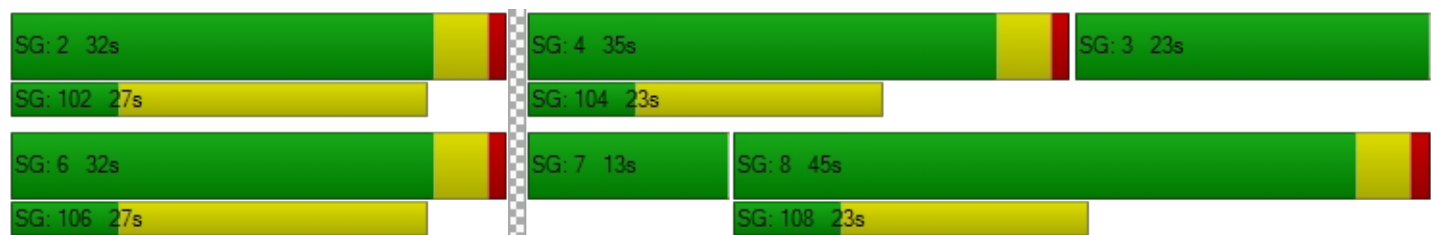
X, volume / capacity	1.23	0.31	1.43	0.20	0.69	0.44	0.09	0.44	0.92	0.16
d, Delay for Lane Group [s/veh]	187.35	7.49	251.27	23.29	32.24	12.92	9.43	44.77	43.99	25.76
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.30	2.43	13.91	1.36	8.51	5.48	0.71	0.53	10.98	0.76
50th-Percentile Queue Length [ft]	207.59	60.67	347.73	34.04	212.64	137.04	17.82	13.20	274.56	18.91
95th-Percentile Queue Length [veh]	14.45	4.37	23.69	2.45	13.29	9.32	1.28	0.95	16.42	1.36
95th-Percentile Queue Length [ft]	361.14	109.20	592.30	61.27	332.21	233.04	32.08	23.76	410.43	34.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	187.35	187.35	7.49	251.27	251.27	23.29	32.24	12.92	9.43	44.77	43.99	25.76
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	69.03			192.46			20.98			42.43		
Approach LOS	E			F			C			D		
d_I, Intersection Delay [s/veh]	61.29											
Intersection LOS	E											
Intersection V/C	1.137											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	870	130	150	770	40	230	380	280	40	210	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	870	130	150	770	40	230	380	280	40	210	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	237	35	39	202	11	61	101	75	12	61	9
Total Analysis Volume [veh/h]	33	947	142	158	810	42	246	406	299	47	244	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	42	42	42	39	39	39	25	25	25
g / C, Green / Cycle	0.33	0.33	0.33	0.46	0.46	0.46	0.44	0.44	0.44	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.26	0.10	0.18	0.22	0.03	0.18	0.21	0.19	0.05	0.07	0.08
s, saturation flow rate [veh/h]	669	3618	1450	879	3618	1437	1341	1900	1537	978	1900	1787
c, Capacity [veh/h]	186	1205	483	384	1668	662	634	830	671	171	519	488
d1, Uniform Delay [s]	33.62	27.15	22.22	17.69	16.86	13.48	16.78	18.18	17.75	38.92	25.71	25.79
k, delay calibration	0.50	0.50	0.50	0.43	0.50	0.50	0.44	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.09	5.20	1.54	2.76	1.01	0.18	1.59	0.17	0.17	0.32	0.10	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.79	0.29	0.41	0.49	0.06	0.39	0.49	0.45	0.27	0.27	0.28
d, Delay for Lane Group [s/veh]	35.70	32.36	23.76	20.46	17.88	13.67	18.37	18.35	17.92	39.24	25.82	25.91
Lane Group LOS	D	C	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.74	9.72	2.38	2.09	5.65	0.48	3.47	5.82	4.19	0.98	2.31	2.26
50th-Percentile Queue Length [ft]	18.47	243.08	59.49	52.30	141.29	12.07	86.71	145.54	104.75	24.51	57.76	56.54
95th-Percentile Queue Length [veh]	1.33	14.84	4.28	3.77	9.55	0.87	6.24	9.78	7.54	1.76	4.16	4.07
95th-Percentile Queue Length [ft]	33.25	370.92	107.09	94.14	238.76	21.73	156.09	244.47	188.56	44.12	103.96	101.78



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.70	32.36	23.76	20.46	17.88	13.67	18.37	18.35	17.92	39.24	25.86	25.91
Movement LOS	D	C	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	31.37			18.11			18.22			27.79		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	23.43											
Intersection LOS	C											
Intersection V/C	0.532											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	190	150	70	180	50	100	850	60	30	500	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	190	150	70	180	50	100	850	60	30	500	30
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	54	43	20	51	14	26	222	16	9	150	9
Total Analysis Volume [veh/h]	23	216	170	80	205	57	105	889	63	36	602	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	55	46	46	55	44	44
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.61	0.52	0.52	0.61	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.14	0.11	0.07	0.15	0.11	0.25	0.26	0.05	0.17	0.17
s, saturation flow rate [veh/h]	1702	1482	1146	1804	969	1900	1829	747	1900	1841
c, Capacity [veh/h]	527	420	185	512	638	982	945	485	932	904
d1, Uniform Delay [s]	26.44	26.08	39.88	27.01	7.59	14.08	14.15	8.00	14.05	14.09
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.23	0.59	0.30	0.04	1.75	1.87	0.30	1.01	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

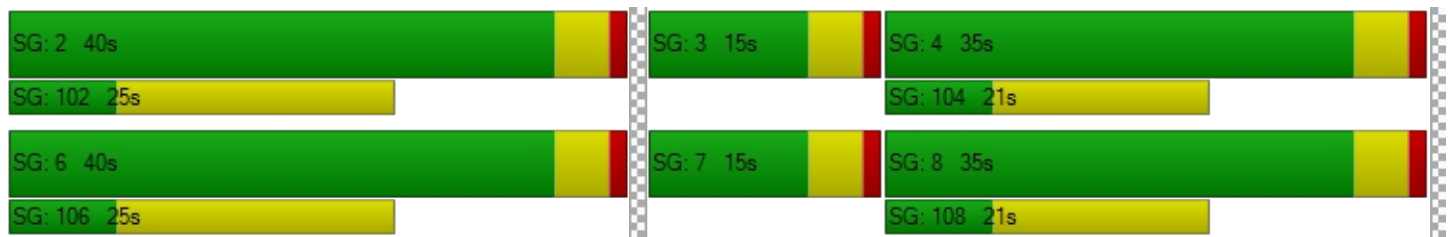
X, volume / capacity	0.45	0.40	0.43	0.51	0.16	0.49	0.50	0.07	0.35	0.35
d, Delay for Lane Group [s/veh]	26.67	26.32	40.47	27.31	7.64	15.83	16.02	8.30	15.06	15.16
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.07	2.86	1.71	4.57	0.76	6.42	6.33	0.29	4.09	4.03
50th-Percentile Queue Length [ft]	101.83	71.62	42.83	114.28	19.10	160.55	158.24	7.23	102.15	100.84
95th-Percentile Queue Length [veh]	7.33	5.16	3.08	8.08	1.38	10.58	10.46	0.52	7.35	7.26
95th-Percentile Queue Length [ft]	183.29	128.92	77.10	201.94	34.38	264.45	261.39	13.01	183.87	181.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.67	26.67	26.32	40.47	27.31	27.31	7.64	15.92	16.02	8.30	15.11	15.16
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.52			30.39			15.10			14.75		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.99											
Intersection LOS	B											
Intersection V/C	0.412											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	490	200	70	430	160	110	840	180	100	590	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	490	200	70	430	160	110	840	180	100	590	40
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	53	19	114	42	28	217	46	28	163	11
Total Analysis Volume [veh/h]	32	519	212	74	455	169	114	867	186	110	650	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	44	44	44	66	55	55	66	55	55
g / C, Green / Cycle	0.28	0.28	0.28	0.37	0.37	0.37	0.55	0.46	0.46	0.55	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.20	0.21	0.08	0.24	0.11	0.13	0.29	0.29	0.15	0.18	0.19
s, saturation flow rate [veh/h]	951	1900	1632	955	1900	1502	912	1900	1743	724	1900	1846
c, Capacity [veh/h]	113	527	453	294	702	555	503	871	799	372	870	846
d1, Uniform Delay [s]	55.34	39.22	39.78	27.60	31.35	26.86	13.77	24.63	24.89	16.35	21.60	21.63
k, delay calibration	0.04	0.11	0.14	0.07	0.08	0.04	0.29	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	1.99	3.57	0.27	0.74	0.11	0.61	3.35	3.90	2.02	1.39	1.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.73	0.77	0.25	0.65	0.30	0.23	0.62	0.64	0.30	0.40	0.41
d, Delay for Lane Group [s/veh]	55.84	41.20	43.35	27.87	32.09	26.98	14.38	27.98	28.80	18.37	22.99	23.08
Lane Group LOS	E	D	D	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.96	10.47	9.82	1.42	11.00	3.47	1.54	12.30	11.81	1.61	6.85	6.73
50th-Percentile Queue Length [ft]	24.07	261.85	245.43	35.55	274.97	86.82	38.55	307.60	295.21	40.27	171.37	168.22
95th-Percentile Queue Length [veh]	1.73	15.78	14.96	2.56	16.44	6.25	2.78	18.06	17.44	2.90	11.15	10.98
95th-Percentile Queue Length [ft]	43.32	394.53	373.89	63.99	410.95	156.27	69.39	451.41	436.11	72.49	278.71	274.58

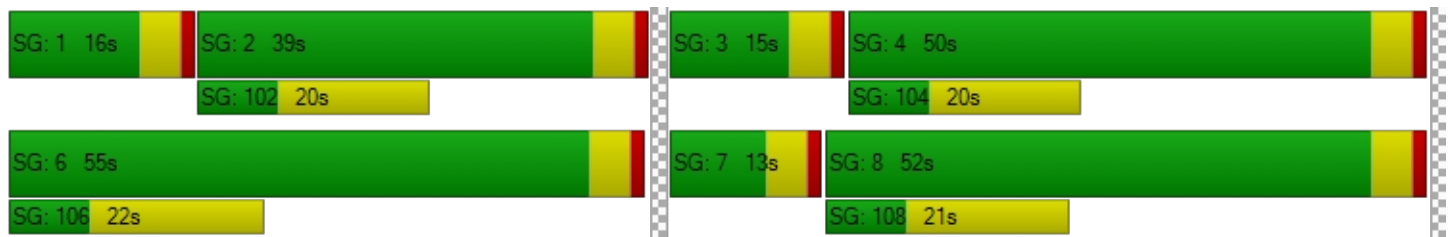


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.84	41.76	43.35	27.87	32.09	26.98	14.38	28.28	28.80	18.37	23.03	23.08
Movement LOS	E	D	D	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	42.79			30.40			27.01			22.40		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	30.13											
Intersection LOS	C											
Intersection V/C	0.567											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	80	400	110	120	280	80	140	990	160	50	820	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	400	110	120	280	80	140	990	160	50	820	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	115	32	34	79	22	36	255	41	13	218	8
Total Analysis Volume [veh/h]	92	459	126	135	314	90	144	1021	165	53	873	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	10	46	46	11	65	65	49	49	49
g / C, Green / Cycle	0.26	0.26	0.26	0.09	0.38	0.38	0.09	0.54	0.54	0.41	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.09	0.24	0.09	0.07	0.17	0.06	0.08	0.32	0.33	0.11	0.24	0.24
s, saturation flow rate [veh/h]	1038	1900	1397	1810	1900	1433	1810	1900	1733	480	1900	1863
c, Capacity [veh/h]	183	491	361	157	728	549	171	1026	936	136	773	758
d1, Uniform Delay [s]	51.09	43.51	36.27	54.04	27.31	24.33	53.39	18.63	19.08	47.73	27.75	27.82
k, delay calibration	0.04	0.20	0.04	0.05	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	14.29	0.21	6.11	0.15	0.05	4.18	2.50	3.08	8.19	3.28	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.94	0.35	0.86	0.43	0.16	0.84	0.59	0.62	0.39	0.59	0.59
d, Delay for Lane Group [s/veh]	51.89	57.80	36.48	60.15	27.46	24.38	57.57	21.13	22.17	55.92	31.03	31.22
Lane Group LOS	D	E	D	E	C	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.69	15.02	3.01	4.25	6.59	1.68	4.47	11.78	11.67	1.81	10.82	10.73
50th-Percentile Queue Length [ft]	67.24	375.53	75.33	106.32	164.71	42.05	111.68	294.49	291.66	45.21	270.44	268.17
95th-Percentile Queue Length [veh]	4.84	21.38	5.42	7.63	10.80	3.03	7.93	17.41	17.27	3.26	16.21	16.10
95th-Percentile Queue Length [ft]	121.04	534.44	135.60	190.87	269.95	75.69	198.33	435.20	431.69	81.38	405.29	402.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.89	57.80	36.48	60.15	27.46	24.38	57.57	21.55	22.17	55.92	31.12	31.22
Movement LOS	D	E	D	E	C	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.03			35.14			25.53			32.50		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.22											
Intersection LOS	C											
Intersection V/C	0.651											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	37.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└			┌└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	50	110	156	190	80	140	1250	220	30	950	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	50	110	156	190	80	140	1250	220	30	950	40
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	14	31	44	60	25	37	331	58	8	264	11
Total Analysis Volume [veh/h]	23	56	123	175	240	101	148	1325	233	33	1056	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	10	66	66	5	60	60
g / C, Green / Cycle	0.29	0.29	0.09	0.55	0.55	0.04	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.11	0.28	0.08	0.41	0.44	0.02	0.46	0.29
s, saturation flow rate [veh/h]	1656	1200	1810	1900	1769	1810	1200	1862
c, Capacity [veh/h]	488	354	159	1047	975	70	603	935
d1, Uniform Delay [s]	33.44	41.67	54.33	20.65	21.40	56.43	27.61	21.04
k, delay calibration	0.04	0.41	0.09	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	34.91	17.74	5.00	6.49	1.79	21.38	2.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.37	0.96	0.93	0.75	0.79	0.47	0.92	0.58
d, Delay for Lane Group [s/veh]	33.61	76.58	72.07	25.65	27.89	58.22	49.00	23.71
Lane Group LOS	C	E	E	C	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.16	13.25	5.22	17.71	18.23	1.01	17.66	11.28
50th-Percentile Queue Length [ft]	104.01	331.30	130.55	442.75	455.66	25.37	441.51	281.93
95th-Percentile Queue Length [veh]	7.49	19.22	8.97	24.61	25.23	1.83	24.55	16.78
95th-Percentile Queue Length [ft]	187.22	480.55	224.25	615.29	630.70	45.66	613.81	419.61

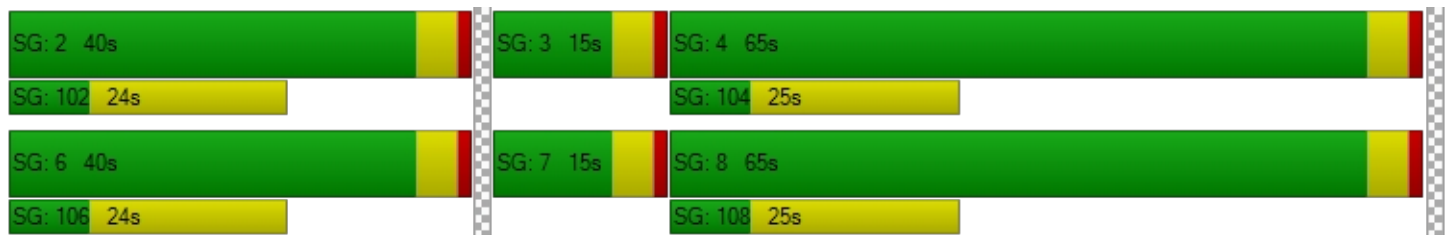


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	33.61	33.61	0.00	76.58	76.58	72.07	26.55	27.89	58.22	36.97	23.71
Movement LOS		C	C		E	E	E	C	C	E	D	C
d_A, Approach Delay [s/veh]	33.61		76.58		30.69			37.08				
Approach LOS	C		E		C			D				
d_I, Intersection Delay [s/veh]	37.66											
Intersection LOS	D											
Intersection V/C	0.827											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	78.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.952

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	660	280	870	250	720	0	0	1240	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	660	280	870	250	720	0	0	1240	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	175	74	231	66	189	0	0	322	10
Total Analysis Volume [veh/h]	0	0	0	700	297	923	263	758	0	0	1289	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	19	75	52	52
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.16	0.63	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.31	0.31	0.15	0.21	0.49	0.49
s, saturation flow rate [veh/h]	1810	1861	1425	1559	1810	3618	1800	900
c, Capacity [veh/h]	534	549	421	460	289	2272	774	387
d1, Uniform Delay [s]	40.92	40.52	42.25	42.25	49.52	10.48	34.16	34.16
k, delay calibration	0.37	0.35	0.49	0.49	0.22	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.11	15.16	59.71	59.46	19.01	0.40	80.64	91.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.92	0.90	1.06	1.06	0.91	0.33	1.15	1.15
d, Delay for Lane Group [s/veh]	60.03	55.68	101.9	101.7	68.53	10.88	114.79	126.03
Lane Group LOS	E	E	F	F	E	B	F	F
Critical Lane Group	No	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	16.31	15.68	18.86	20.60	9.25	4.68	19.61	20.82
50th-Percentile Queue Length [ft]	407.7	391.9	471.4	514.9	231.26	117.01	490.29	520.49
95th-Percentile Queue Length [veh]	22.93	22.17	26.93	29.15	14.24	8.23	29.42	31.00
95th-Percentile Queue Length [ft]	573.3	554.3	673.1	728.7	355.96	205.71	735.41	775.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	58.66	57.46	101.83	68.53	10.88	0.00	0.00	118.29	126.03
Movement LOS				E	E	F	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			79.26			25.73			118.54		
Approach LOS	A			E			C			F		
d_I, Intersection Delay [s/veh]	78.70											
Intersection LOS	E											
Intersection V/C	0.952											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	132.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.048

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↑↑↑						↑↑↑			↑↑↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	170	260	240	0	0	0	0	800	360	560	1240	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	260	240	0	0	0	0	800	360	560	1240	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	78	72	0	0	0	0	213	96	149	331	0
Total Analysis Volume [veh/h]	204	312	288	0	0	0	0	851	383	597	1322	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24		70	70	70	12	87
g / C, Green / Cycle	0.20	0.20	0.20		0.59	0.59	0.59	0.10	0.73
(v / s)_j Volume / Saturation Flow Rate	0.15	0.14	0.18		0.17	0.20	0.62	0.25	0.37
s, saturation flow rate [veh/h]	1830	1729	1581		3618	1576	500	2400	3618
c, Capacity [veh/h]	362	342	313		2119	923	293	243	2624
d1, Uniform Delay [s]	45.15	45.15	47.20		12.41	12.80	24.86	53.92	7.13
k, delay calibration	0.07	0.07	0.20		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.92	2.01	17.58		0.03	0.08	67.30	666.49	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.73	0.73	0.92		0.29	0.33	1.05	2.45	0.50
d, Delay for Lane Group [s/veh]	47.07	47.15	64.78		12.44	12.88	92.15	720.40	7.82
Lane Group LOS	D	D	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	7.53	7.11	9.85		3.98	4.12	13.03	26.19	6.78
50th-Percentile Queue Length [ft]	188.22	177.84	246.19		99.53	102.94	325.68	654.69	169.53
95th-Percentile Queue Length [veh]	12.03	11.49	14.99		7.17	7.41	19.69	42.43	11.05
95th-Percentile Queue Length [ft]	300.72	287.20	374.86		179.16	185.29	492.34	1060.68	276.30



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.07	47.14	64.78	0.00	0.00	0.00	0.00	12.46	76.73	720.40	7.82	0.00
Movement LOS	D	D	E					B	E	F	A	
d_A, Approach Delay [s/veh]	53.44			0.00			32.48			229.51		
Approach LOS	D			A			C			F		
d_I, Intersection Delay [s/veh]	132.29											
Intersection LOS	F											
Intersection V/C	1.048											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.731

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	170	360	50	140	1050	120	80	1020	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	170	360	50	140	1050	120	80	1020	110
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	49	103	14	41	307	35	21	274	30
Total Analysis Volume [veh/h]	107	437	139	195	412	57	164	1227	140	86	1096	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	13	35	35	10	51	51	7	48	48
g / C, Green / Cycle	0.07	0.25	0.25	0.11	0.29	0.29	0.09	0.43	0.43	0.06	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.11	0.13	0.13	0.09	0.34	0.09	0.05	0.30	0.07
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1799	1810	3618	1560	1810	3618	1575
c, Capacity [veh/h]	133	475	395	203	550	520	157	1540	664	109	1444	628
d1, Uniform Delay [s]	54.79	43.83	37.01	53.01	34.68	34.77	54.81	29.97	21.76	55.65	31.09	23.43
k, delay calibration	0.04	0.24	0.11	0.32	0.11	0.11	0.15	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	14.92	0.53	41.42	0.54	0.59	51.24	4.38	0.72	4.68	3.80	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

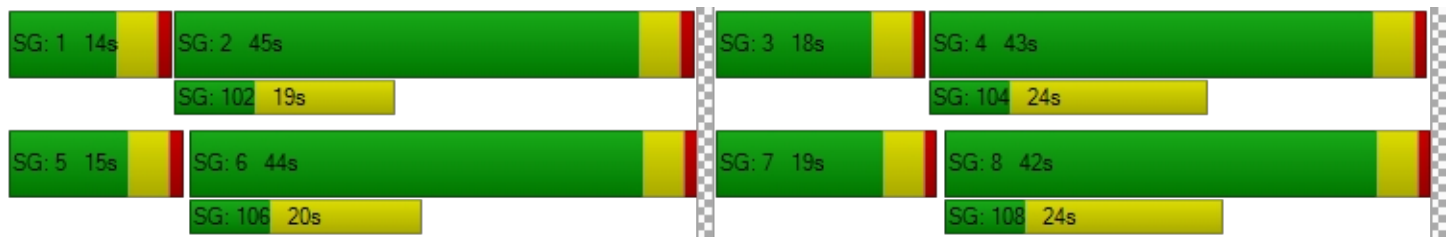
X, volume / capacity	0.81	0.92	0.35	0.96	0.43	0.44	1.04	0.80	0.21	0.79	0.76	0.19
d, Delay for Lane Group [s/veh]	59.13	58.75	37.55	94.43	35.23	35.36	106.05	34.35	22.48	60.33	34.89	24.09
Lane Group LOS	E	E	D	F	D	D	F	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	14.39	3.40	8.13	5.71	5.51	6.94	15.82	2.60	2.69	14.06	2.27
50th-Percentile Queue Length [ft]	83.01	359.87	84.90	203.17	142.77	137.82	173.40	395.56	64.99	67.26	351.59	56.84
95th-Percentile Queue Length [veh]	5.98	20.62	6.11	12.80	9.63	9.36	11.43	22.35	4.68	4.84	20.21	4.09
95th-Percentile Queue Length [ft]	149.41	515.43	152.81	320.05	240.74	234.09	285.81	558.65	116.97	121.06	505.35	102.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	58.75	37.55	94.43	35.28	35.36	106.05	34.35	22.48	60.33	34.89	24.09
Movement LOS	E	E	D	F	D	D	F	C	C	E	C	C
d_A, Approach Delay [s/veh]	54.50			52.66			40.94			35.59		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.35											
Intersection LOS	D											
Intersection V/C	0.731											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	50	670	10	90	600	60	80	390	30	80	360	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	670	10	90	600	60	80	390	30	80	360	10
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	180	3	24	162	16	22	105	8	24	109	3
Total Analysis Volume [veh/h]	54	720	11	97	647	65	86	419	32	97	436	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	27	27	27	27	27
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.07	0.19	0.19	0.13	0.19	0.19	0.09	0.22	0.02	0.10	0.24
s, saturation flow rate [veh/h]	749	1900	1887	733	1900	1831	953	1900	1570	980	1890
c, Capacity [veh/h]	392	1028	1021	384	1028	991	204	654	540	225	650
d1, Uniform Delay [s]	15.37	10.44	10.45	16.51	10.41	10.42	34.05	22.08	17.57	32.98	22.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.97	0.98	1.57	0.95	0.99	0.51	0.39	0.02	0.48	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.36	0.36	0.25	0.35	0.35	0.42	0.64	0.06	0.43	0.69
d, Delay for Lane Group [s/veh]	16.10	11.41	11.42	18.08	11.36	11.41	34.56	22.47	17.59	33.46	23.05
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.68	3.59	3.57	1.33	3.53	3.44	1.59	6.24	0.38	1.76	6.83
50th-Percentile Queue Length [ft]	17.08	89.74	89.37	33.25	88.24	85.89	39.63	156.12	9.44	43.98	170.81
95th-Percentile Queue Length [veh]	1.23	6.46	6.43	2.39	6.35	6.18	2.85	10.34	0.68	3.17	11.12
95th-Percentile Queue Length [ft]	30.74	161.53	160.86	59.86	158.83	154.60	71.33	258.57	16.99	79.16	277.98



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.10	11.42	11.42	18.08	11.38	11.41	34.56	22.47	17.59	33.46	23.05	23.05
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.74			12.19			24.12			24.90		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.04											
Intersection LOS	B											
Intersection V/C	0.430											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	560	30	70	580	50	20	240	30	120	500	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	560	30	70	580	50	20	240	30	120	500	150
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	155	8	19	155	13	6	70	9	32	135	40
Total Analysis Volume [veh/h]	100	621	33	75	622	54	23	280	35	129	539	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	30	30	30	30	30
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.17	0.09	0.18	0.18	0.03	0.17	0.12	0.28	0.10
s, saturation flow rate [veh/h]	774	1900	1860	791	1900	1838	880	1853	1076	1900	1578
c, Capacity [veh/h]	421	1071	1048	432	1071	1036	127	619	273	635	527
d1, Uniform Delay [s]	16.16	10.37	10.38	15.29	10.46	10.47	41.45	24.03	34.45	27.85	22.23
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.13	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	0.75	0.77	0.87	0.79	0.82	0.25	0.24	0.47	3.81	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.24	0.31	0.31	0.17	0.32	0.32	0.18	0.51	0.47	0.85	0.31
d, Delay for Lane Group [s/veh]	17.48	11.12	11.15	16.16	11.24	11.29	41.70	24.27	34.92	31.66	22.35
Lane Group LOS	B	B	B	B	B	B	D	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.40	3.32	3.28	0.99	3.48	3.40	0.50	5.19	2.59	10.88	2.47
50th-Percentile Queue Length [ft]	35.00	83.09	81.90	24.83	87.07	85.09	12.38	129.69	64.79	271.89	61.65
95th-Percentile Queue Length [veh]	2.52	5.98	5.90	1.79	6.27	6.13	0.89	8.92	4.66	16.28	4.44
95th-Percentile Queue Length [ft]	63.00	149.57	147.43	44.70	156.72	153.16	22.29	223.07	116.62	407.10	110.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.48	11.13	11.15	16.16	11.27	11.29	41.70	24.27	24.27	34.92	31.66	22.35
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.97			11.76			25.46			30.35		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.32											
Intersection LOS	B											
Intersection V/C	0.465											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	450	20	100	340	60	80	210	30	30	110	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	450	20	100	340	60	80	210	30	30	110	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	126	6	26	89	16	21	55	8	8	30	13
Total Analysis Volume [veh/h]	56	503	22	104	354	63	83	219	31	32	118	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.44	0.44	0.44
(v / s)_j Volume / Saturation Flow Rate	0.06	0.28	0.12	0.23	0.20	0.09	0.04
s, saturation flow rate [veh/h]	955	1871	885	1792	1693	1736	1506
c, Capacity [veh/h]	312	767	252	735	814	831	658
d1, Uniform Delay [s]	20.37	14.55	24.63	13.64	11.64	10.35	9.89
k, delay calibration	0.04	0.06	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.57	0.40	0.26	1.52	0.48	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.68	0.41	0.57	0.41	0.18	0.08
d, Delay for Lane Group [s/veh]	20.47	15.12	25.03	13.90	13.16	10.83	10.13
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	5.20	1.36	3.84	2.99	1.17	0.41
50th-Percentile Queue Length [ft]	15.76	130.09	34.03	95.93	74.69	29.25	10.23
95th-Percentile Queue Length [veh]	1.13	8.94	2.45	6.91	5.38	2.11	0.74
95th-Percentile Queue Length [ft]	28.37	223.61	61.26	172.68	134.44	52.65	18.42

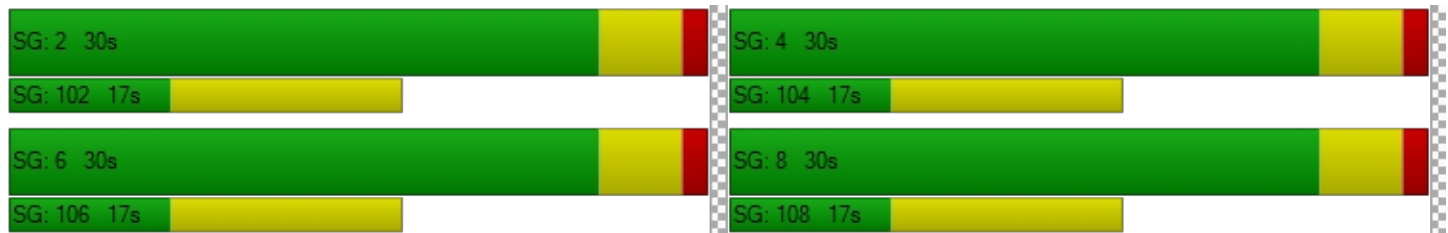


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.47	15.12	15.12	25.03	13.90	13.90	13.16	13.16	13.16	10.83	10.83	10.13
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.63			16.12			13.16			10.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.66											
Intersection LOS	B											
Intersection V/C	0.477											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	960	40	60	910	90	90	380	90	100	260	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	960	40	60	910	90	90	380	90	100	260	60
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	273	11	16	244	24	24	102	24	30	79	18
Total Analysis Volume [veh/h]	57	1092	46	64	974	96	97	408	97	121	315	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	28	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.11	0.30	0.30	0.13	0.29	0.29	0.09	0.21	0.06	0.12	0.17	0.05
s, saturation flow rate [veh/h]	532	1900	1862	501	1900	1789	1041	1900	1548	983	1900	1469
c, Capacity [veh/h]	256	1007	987	242	1007	948	297	674	549	238	674	521
d1, Uniform Delay [s]	21.18	12.64	12.67	22.22	12.36	12.51	28.31	21.20	17.76	32.92	19.95	17.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.00	2.33	2.41	2.65	2.07	2.34	0.24	0.33	0.06	0.63	0.19	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

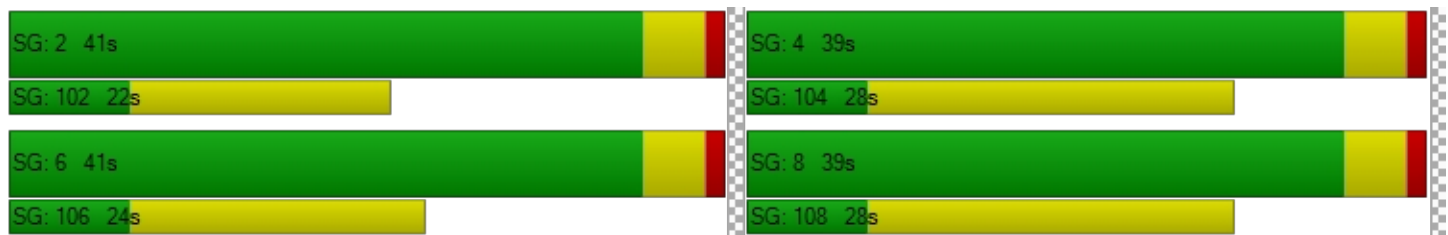
X, volume / capacity	0.22	0.57	0.57	0.26	0.54	0.56	0.33	0.61	0.18	0.51	0.47	0.14
d, Delay for Lane Group [s/veh]	23.18	14.97	15.09	24.87	14.43	14.86	28.54	21.53	17.82	33.55	20.14	17.56
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.92	6.66	6.61	1.08	6.15	6.09	1.62	6.01	1.19	2.28	4.45	0.90
50th-Percentile Queue Length [ft]	22.97	166.46	165.13	27.11	153.80	152.16	40.39	150.33	29.85	57.00	111.15	22.60
95th-Percentile Queue Length [veh]	1.65	10.89	10.82	1.95	10.22	10.13	2.91	10.03	2.15	4.10	7.90	1.63
95th-Percentile Queue Length [ft]	41.35	272.26	270.50	48.80	255.49	253.31	72.70	250.87	53.73	102.60	197.60	40.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.18	15.02	15.09	24.87	14.62	14.86	28.54	21.53	17.82	33.55	20.14	17.56
Movement LOS	C	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	15.41			15.22			22.06			22.96		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.63											
Intersection LOS	B											
Intersection V/C	0.518											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	150	60	80	140	60	40	480	50	20	300	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	150	60	80	140	60	40	480	50	20	300	30
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	41	17	25	45	19	11	127	13	5	80	8
Total Analysis Volume [veh/h]	11	166	66	102	178	76	42	508	53	21	320	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.22	0.43	0.05	0.04	0.27	0.03	0.02	0.17	0.02
s, saturation flow rate [veh/h]	1125	653	1579	1068	1900	1537	904	1900	1540
c, Capacity [veh/h]	430	284	538	553	1034	837	416	1034	838
d1, Uniform Delay [s]	20.76	26.54	18.27	13.37	11.33	8.60	16.74	9.99	8.48
k, delay calibration	0.17	0.50	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.80	50.09	0.12	0.27	1.67	0.15	0.23	0.78	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.56	0.99	0.14	0.08	0.49	0.06	0.05	0.31	0.04
d, Delay for Lane Group [s/veh]	22.56	76.63	18.39	13.64	13.00	8.75	16.97	10.76	8.57
Lane Group LOS	C	E	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	3.45	9.30	0.94	0.47	5.51	0.43	0.27	3.02	0.26
50th-Percentile Queue Length [ft]	86.36	232.52	23.44	11.66	137.86	10.81	6.76	75.45	6.43
95th-Percentile Queue Length [veh]	6.22	14.30	1.69	0.84	9.37	0.78	0.49	5.43	0.46
95th-Percentile Queue Length [ft]	155.45	357.56	42.19	20.99	234.14	19.46	12.17	135.80	11.57



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.56	22.56	22.56	76.63	76.63	18.39	13.64	13.00	8.75	16.97	10.76	8.57
Movement LOS	C	C	C	E	E	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	22.56			64.20			12.67			10.92		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	25.43											
Intersection LOS	C											
Intersection V/C	0.696											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	660	90	40	610	100	40	420	80	60	390	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	660	90	40	610	100	40	420	80	60	390	10
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	178	24	10	160	26	11	111	21	16	102	3
Total Analysis Volume [veh/h]	54	711	97	42	640	105	42	444	85	63	408	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.07	0.22	0.22	0.06	0.20	0.20	0.04	0.23	0.05	0.07	0.21	0.01
s, saturation flow rate [veh/h]	724	1900	1806	684	1900	1789	984	1900	1552	954	1900	1546
c, Capacity [veh/h]	397	1058	1006	372	1058	996	202	623	509	179	623	507
d1, Uniform Delay [s]	14.36	10.03	10.05	14.71	9.82	9.85	32.78	23.56	19.10	35.23	22.99	18.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	1.08	1.16	0.62	0.96	1.03	0.19	1.52	0.06	0.44	0.71	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.39	0.39	0.11	0.36	0.36	0.21	0.71	0.17	0.35	0.65	0.02
d, Delay for Lane Group [s/veh]	15.08	11.11	11.21	15.33	10.78	10.89	32.96	25.08	19.16	35.67	23.70	18.18
Lane Group LOS	B	B	B	B	B	B	C	C	B	D	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.66	3.98	3.84	0.52	3.60	3.46	0.75	7.25	1.09	1.19	6.38	0.12
50th-Percentile Queue Length [ft]	16.44	99.54	96.12	12.96	89.99	86.49	18.69	181.16	27.30	29.68	159.61	3.05
95th-Percentile Queue Length [veh]	1.18	7.17	6.92	0.93	6.48	6.23	1.35	11.66	1.97	2.14	10.53	0.22
95th-Percentile Queue Length [ft]	29.58	179.17	173.01	23.33	161.98	155.68	33.65	291.53	49.13	53.43	263.21	5.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.08	11.15	11.21	15.33	10.82	10.89	32.96	25.08	19.16	35.67	23.70	18.18
Movement LOS	B	B	B	B	B	B	C	C	B	D	C	B
d_A, Approach Delay [s/veh]	11.40			11.07			24.78			25.15		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.58											
Intersection LOS	B											
Intersection V/C	0.453											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	420	50	70	390	100	10	410	50	70	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	420	50	70	390	100	10	410	50	70	380	40
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	109	13	19	107	27	3	113	14	19	106	11
Total Analysis Volume [veh/h]	31	435	52	77	426	109	11	450	55	78	422	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.03	0.23	0.03	0.08	0.22	0.07	0.01	0.24	0.04	0.08	0.22	0.03
s, saturation flow rate [veh/h]	973	1900	1565	967	1900	1543	972	1900	1518	944	1900	1553
c, Capacity [veh/h]	448	1052	867	442	1052	855	231	598	477	213	598	488
d1, Uniform Delay [s]	15.06	9.02	7.19	16.03	8.97	7.48	26.65	21.52	17.04	29.76	21.11	16.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	1.20	0.13	0.86	1.16	0.31	0.03	0.76	0.04	0.39	0.58	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.41	0.06	0.17	0.40	0.13	0.05	0.75	0.12	0.37	0.71	0.09
d, Delay for Lane Group [s/veh]	15.35	10.22	7.33	16.89	10.12	7.79	26.68	22.28	17.08	30.16	21.69	16.93
Lane Group LOS	B	B	A	B	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.34	3.50	0.33	0.90	3.40	0.73	0.16	6.27	0.60	1.24	5.75	0.48
50th-Percentile Queue Length [ft]	8.50	87.43	8.30	22.57	85.03	18.18	3.93	156.67	14.99	30.90	143.64	11.89
95th-Percentile Queue Length [veh]	0.61	6.29	0.60	1.62	6.12	1.31	0.28	10.37	1.08	2.23	9.68	0.86
95th-Percentile Queue Length [ft]	15.30	157.37	14.93	40.62	153.05	32.72	7.08	259.31	26.98	55.63	241.92	21.40

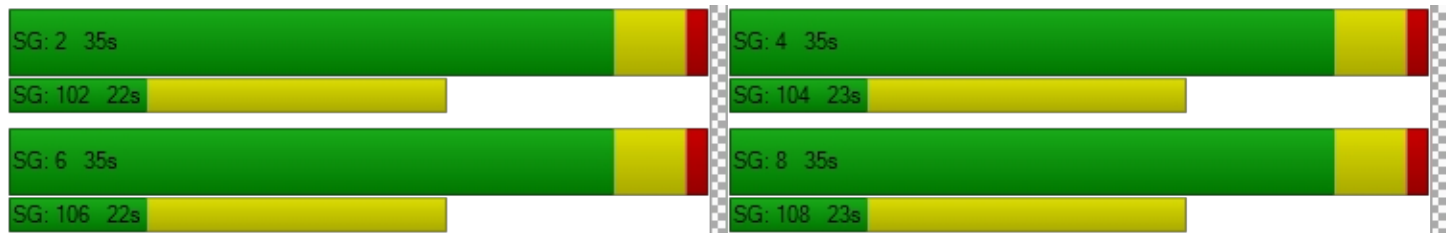


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.35	10.22	7.33	16.89	10.12	7.79	26.68	22.28	17.08	30.16	21.69	16.93
Movement LOS	B	B	A	B	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	10.24			10.56			21.82			22.52		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.11											
Intersection LOS	B											
Intersection V/C	0.466											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	60	410	60	230	620	60	20	330	130	110	430	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	410	60	230	620	60	20	330	130	110	430	40
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	109	16	61	163	16	6	99	39	30	117	11
Total Analysis Volume [veh/h]	64	436	64	243	654	63	24	397	156	120	468	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.09	0.13	0.14	0.27	0.19	0.19	0.03	0.21	0.10	0.12	0.25	0.03
s, saturation flow rate [veh/h]	745	1900	1803	909	1900	1830	935	1900	1514	987	1900	1553
c, Capacity [veh/h]	356	920	873	450	920	886	232	720	574	278	720	588
d1, Uniform Delay [s]	16.66	10.76	10.79	18.27	11.53	11.54	26.69	17.07	15.06	26.94	17.92	13.89
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.10	0.75	0.80	4.60	1.28	1.34	0.07	0.25	0.09	0.39	0.37	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

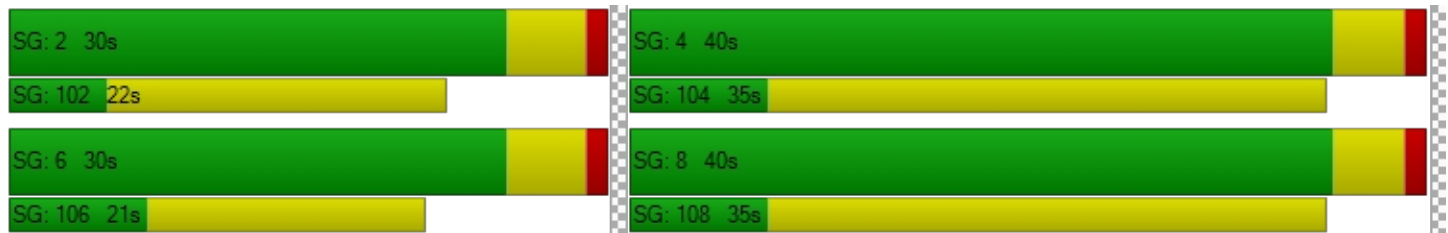
X, volume / capacity	0.18	0.28	0.28	0.54	0.40	0.40	0.10	0.55	0.27	0.43	0.65	0.07
d, Delay for Lane Group [s/veh]	17.76	11.51	11.59	22.87	12.80	12.88	26.76	17.32	15.15	27.33	18.29	13.91
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.90	2.69	2.61	3.38	3.24	3.16	0.35	4.67	1.61	1.82	5.79	0.41
50th-Percentile Queue Length [ft]	22.47	67.16	65.13	84.47	80.91	78.89	8.66	116.65	40.37	45.53	144.66	10.25
95th-Percentile Queue Length [veh]	1.62	4.84	4.69	6.08	5.83	5.68	0.62	8.21	2.91	3.28	9.73	0.74
95th-Percentile Queue Length [ft]	40.45	120.89	117.23	152.05	145.64	142.00	15.59	205.21	72.67	81.96	243.29	18.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.76	11.54	11.59	22.87	12.84	12.88	26.76	17.32	15.15	27.33	18.29	13.91
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.25			15.38			17.12			19.71		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.10											
Intersection LOS	B											
Intersection V/C	0.514											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	380	50	60	490	40	90	70	80	40	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	380	50	60	490	40	90	70	80	40	80	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	99	13	16	131	11	29	22	26	12	23	6
Total Analysis Volume [veh/h]	42	398	52	64	525	43	115	90	102	46	93	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	13	8	8
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.05	0.24	0.07	0.28	0.03	0.19	0.10
s, saturation flow rate [veh/h]	868	1839	931	1900	1485	1582	1679
c, Capacity [veh/h]	367	799	408	826	646	585	601
d1, Uniform Delay [s]	11.63	6.57	10.95	6.86	5.11	10.11	9.12
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.23	0.07	0.30	0.02	0.27	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.56	0.16	0.64	0.07	0.52	0.27
d, Delay for Lane Group [s/veh]	11.68	6.81	11.02	7.16	5.13	10.38	9.20
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.23	0.29	1.50	0.09	1.23	0.58
50th-Percentile Queue Length [ft]	4.96	30.72	7.22	37.58	2.26	30.81	14.53
95th-Percentile Queue Length [veh]	0.36	2.21	0.52	2.71	0.16	2.22	1.05
95th-Percentile Queue Length [ft]	8.93	55.30	12.99	67.65	4.07	55.45	26.16

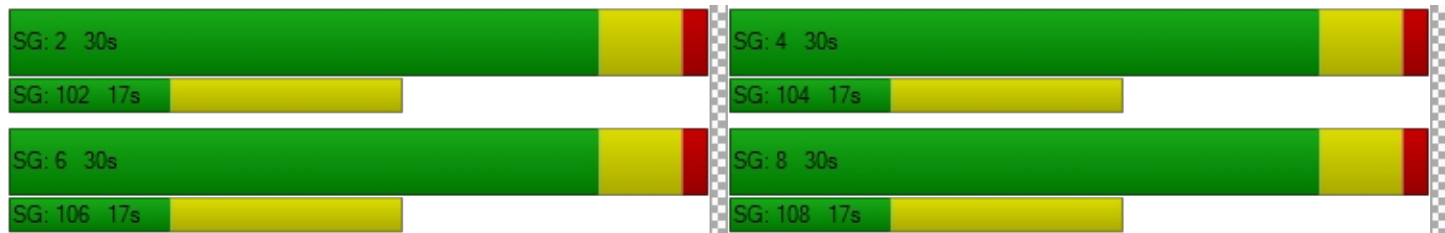


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.68	6.81	6.81	11.02	7.16	5.13	10.38	10.38	10.38	9.20	9.20	9.20
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.22			7.42			10.38			9.20		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.11											
Intersection LOS	A											
Intersection V/C	0.470											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	60	1100	60	80	1070	50	100	250	70	50	160	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1100	60	80	1070	50	100	250	70	50	160	40
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	296	16	22	289	14	26	65	18	13	42	10
Total Analysis Volume [veh/h]	65	1186	65	87	1157	54	104	260	73	52	167	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.14	0.33	0.33	0.19	0.32	0.32	0.09	0.18	0.05	0.11
s, saturation flow rate [veh/h]	468	1900	1857	451	1900	1856	1180	1813	1056	1822
c, Capacity [veh/h]	275	1143	1118	264	1143	1117	277	513	185	516
d1, Uniform Delay [s]	16.97	9.49	9.52	18.64	9.34	9.38	31.03	25.17	34.87	23.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	1.92	1.99	3.30	1.78	1.86	0.31	0.52	0.31	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

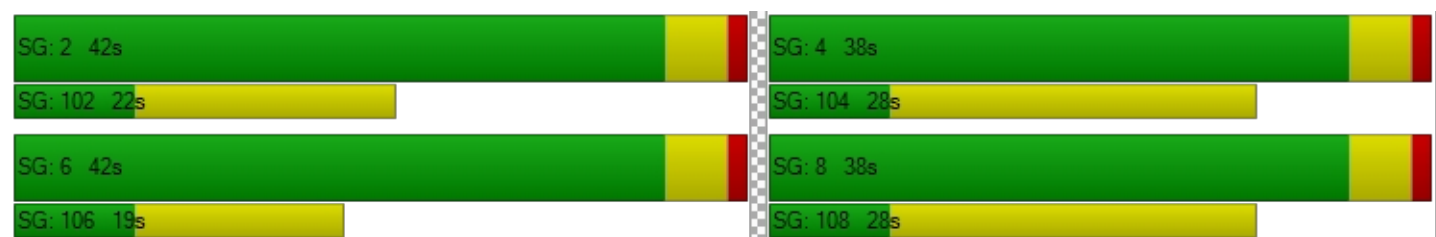
X, volume / capacity	0.24	0.55	0.56	0.33	0.53	0.54	0.37	0.65	0.28	0.41
d, Delay for Lane Group [s/veh]	18.98	11.41	11.51	21.94	11.12	11.24	31.34	25.69	35.17	23.40
Lane Group LOS	B	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.93	6.00	5.95	1.42	6.11	6.07	1.80	5.31	0.95	3.06
50th-Percentile Queue Length [ft]	23.28	150.12	148.66	35.58	152.67	151.64	45.08	132.75	23.83	76.44
95th-Percentile Queue Length [veh]	1.68	10.02	9.95	2.56	10.16	10.10	3.25	9.09	1.72	5.50
95th-Percentile Queue Length [ft]	41.91	250.59	248.63	64.04	253.98	252.61	81.14	227.23	42.89	137.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.98	11.46	11.51	21.94	11.18	11.24	31.34	25.69	25.69	35.17	23.40	23.40
Movement LOS	B	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	11.83			11.90			27.04			25.75		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.96											
Intersection LOS	B											
Intersection V/C	0.518											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	220	150	30	170	60	70	310	40	10	210	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	220	150	30	170	60	70	310	40	10	210	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	69	47	9	52	18	19	83	11	3	60	3
Total Analysis Volume [veh/h]	13	277	189	37	210	74	75	333	43	12	242	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	47	47	47	47
g / C, Green / Cycle	0.30	0.30	0.30	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.27	0.18	0.05	0.24	0.03	0.14	0.01
s, saturation flow rate [veh/h]	1742	1385	1551	1729	1537	1872	1557
c, Capacity [veh/h]	564	463	461	1070	904	1147	916
d1, Uniform Delay [s]	27.17	22.69	20.73	8.64	6.98	7.83	6.84
k, delay calibration	0.29	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.20	0.96	0.16	1.03	0.10	0.45	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.53	0.16	0.38	0.05	0.22	0.01
d, Delay for Lane Group [s/veh]	36.37	23.64	20.89	9.68	7.08	8.28	6.86
Lane Group LOS	D	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.68	3.67	0.99	3.45	0.29	1.92	0.08
50th-Percentile Queue Length [ft]	242.00	91.72	24.78	86.26	7.31	47.89	2.00
95th-Percentile Queue Length [veh]	14.78	6.60	1.78	6.21	0.53	3.45	0.14
95th-Percentile Queue Length [ft]	369.56	165.09	44.60	155.27	13.17	86.21	3.59

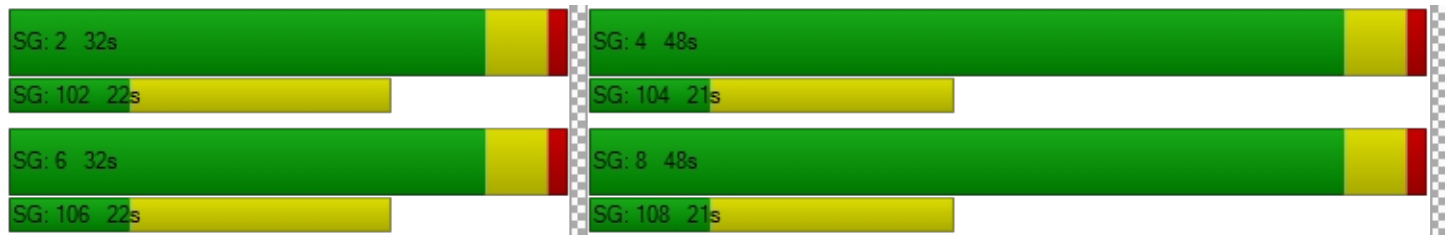


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.37	36.37	36.37	23.64	23.64	20.89	9.68	9.68	7.08	8.28	8.28	6.86
Movement LOS	D	D	D	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	36.37			23.01			9.43			8.21		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	20.60											
Intersection LOS	C											
Intersection V/C	0.511											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	940	100	40	830	80	30	300	70	120	280	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	940	100	40	830	80	30	300	70	120	280	40
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	244	26	11	220	21	8	83	19	33	76	11
Total Analysis Volume [veh/h]	42	976	104	42	881	85	33	331	77	130	303	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.29	0.29	0.08	0.26	0.26	0.03	0.22	0.13	0.19
s, saturation flow rate [veh/h]	590	1900	1820	530	1900	1831	1041	1828	990	1848
c, Capacity [veh/h]	285	987	946	250	987	952	287	668	242	675
d1, Uniform Delay [s]	19.26	12.97	13.03	21.15	12.44	12.46	27.13	20.73	33.02	19.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.08	2.26	2.41	1.45	1.79	1.87	0.07	0.71	0.69	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.56	0.56	0.17	0.50	0.50	0.11	0.61	0.54	0.51
d, Delay for Lane Group [s/veh]	20.34	15.23	15.44	22.60	14.22	14.33	27.20	21.44	33.71	20.04
Lane Group LOS	C	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	6.63	6.47	0.68	5.64	5.50	0.51	5.90	2.40	4.72
50th-Percentile Queue Length [ft]	15.69	165.80	161.83	16.90	140.98	137.44	12.82	147.56	59.92	117.99
95th-Percentile Queue Length [veh]	1.13	10.86	10.65	1.22	9.53	9.34	0.92	9.89	4.31	8.28
95th-Percentile Queue Length [ft]	28.24	271.39	266.15	30.43	238.35	233.58	23.08	247.17	107.86	207.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.34	15.32	15.44	22.60	14.27	14.33	27.20	21.44	21.44	33.71	20.04	20.04
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	15.52			14.62			21.87			23.77		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.43											
Intersection LOS	B											
Intersection V/C	0.515											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	30	530	40	50	480	60	30	320	20	90	290	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	530	40	50	480	60	30	320	20	90	290	50
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	134	10	14	130	16	9	93	6	25	80	14
Total Analysis Volume [veh/h]	30	537	41	54	519	65	35	370	23	99	320	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.03	0.28	0.03	0.06	0.27	0.04	0.04	0.21	0.10	0.21
s, saturation flow rate [veh/h]	895	1900	1556	880	1900	1571	995	1870	996	1808
c, Capacity [veh/h]	388	1064	871	375	1064	879	246	577	241	558
d1, Uniform Delay [s]	16.83	9.44	6.96	17.78	9.32	7.07	26.57	21.15	28.79	21.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	1.71	0.10	0.81	1.60	0.16	0.10	0.53	0.42	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.50	0.05	0.14	0.49	0.07	0.14	0.68	0.41	0.67
d, Delay for Lane Group [s/veh]	17.21	11.16	7.06	18.59	10.92	7.23	26.67	21.68	29.21	21.60
Lane Group LOS	B	B	A	B	B	A	C	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.36	4.59	0.25	0.68	4.37	0.41	0.50	5.22	1.52	4.96
50th-Percentile Queue Length [ft]	8.92	114.67	6.36	16.94	109.14	10.24	12.43	130.42	38.11	124.03
95th-Percentile Queue Length [veh]	0.64	8.10	0.46	1.22	7.79	0.74	0.89	8.96	2.74	8.61
95th-Percentile Queue Length [ft]	16.06	202.47	11.44	30.50	194.81	18.43	22.37	224.06	68.60	215.35

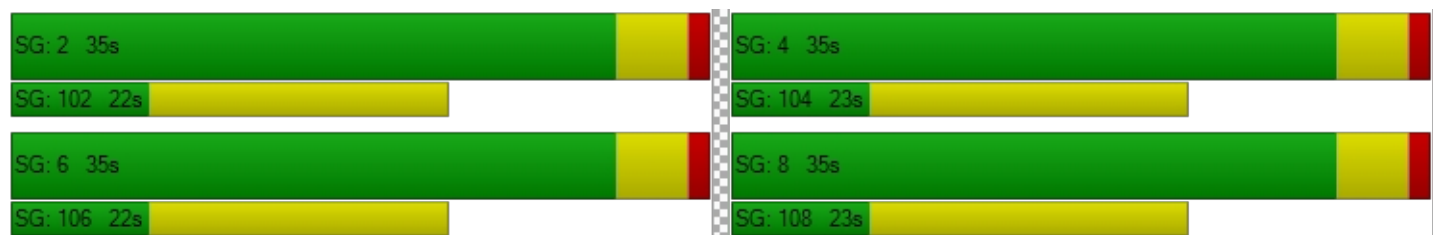


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.21	11.16	7.06	18.59	10.92	7.23	26.67	21.68	21.68	29.21	21.60	21.60
Movement LOS	B	B	A	B	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.18			11.20			22.09			23.19		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.01											
Intersection LOS	B											
Intersection V/C	0.493											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST)\ /MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	510	120	60	490	170	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	510	120	60	490	170	130
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	142	33	16	128	50	39
Total Analysis Volume [veh/h]	566	133	63	512	202	154
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	28	28	28	28	28	28
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.30	0.09	0.07	0.27	0.11	0.10
s, saturation flow rate [veh/h]	1900	1543	847	1900	1810	1550
c, Capacity [veh/h]	836	679	382	836	426	365
d1, Uniform Delay [s]	6.34	4.87	11.04	6.09	9.32	9.19
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.05	0.07	0.27	0.30	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

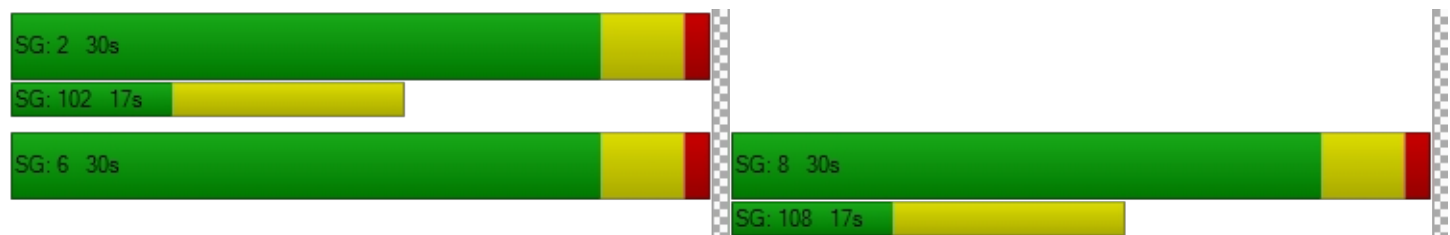
X, volume / capacity	0.68	0.20	0.17	0.61	0.47	0.42
d, Delay for Lane Group [s/veh]	6.70	4.92	11.12	6.36	9.62	9.48
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.30	0.23	0.27	1.12	0.80	0.61
50th-Percentile Queue Length [ft]	32.59	5.75	6.64	28.09	20.12	15.19
95th-Percentile Queue Length [veh]	2.35	0.41	0.48	2.02	1.45	1.09
95th-Percentile Queue Length [ft]	58.66	10.35	11.96	50.56	36.22	27.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.70	4.92	11.12	6.36	9.62	9.48
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	6.36		6.88		9.56	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.24					
Intersection LOS	A					
Intersection V/C	0.410					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1100	70	100	990	60	160	340	150	80	260	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1100	70	100	990	60	160	340	150	80	260	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	294	19	28	273	17	43	92	41	26	85	13
Total Analysis Volume [veh/h]	32	1176	75	110	1092	66	173	369	163	105	341	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	32	32	32	32	32
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.07	0.33	0.05	0.23	0.31	0.31	0.17	0.19	0.11	0.10	0.21
s, saturation flow rate [veh/h]	492	3618	1520	484	1900	1845	996	1900	1551	1019	1844
c, Capacity [veh/h]	209	1767	742	200	928	901	289	753	615	312	731
d1, Uniform Delay [s]	24.55	15.50	11.00	30.91	15.11	15.18	31.01	18.06	16.26	27.25	18.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.55	2.00	0.27	10.47	3.24	3.43	2.00	0.49	0.23	0.63	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.67	0.10	0.55	0.63	0.64	0.60	0.49	0.27	0.34	0.54
d, Delay for Lane Group [s/veh]	26.10	17.50	11.28	41.38	18.34	18.61	33.00	18.55	16.49	27.88	19.12
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.58	8.08	0.74	2.58	7.81	7.74	3.28	4.92	1.95	1.78	5.50
50th-Percentile Queue Length [ft]	14.38	202.09	18.59	64.60	195.14	193.44	81.92	122.90	48.83	44.39	137.61
95th-Percentile Queue Length [veh]	1.04	12.75	1.34	4.65	12.39	12.30	5.90	8.55	3.52	3.20	9.35
95th-Percentile Queue Length [ft]	25.89	318.67	33.47	116.28	309.69	307.49	147.46	213.80	87.89	79.90	233.80

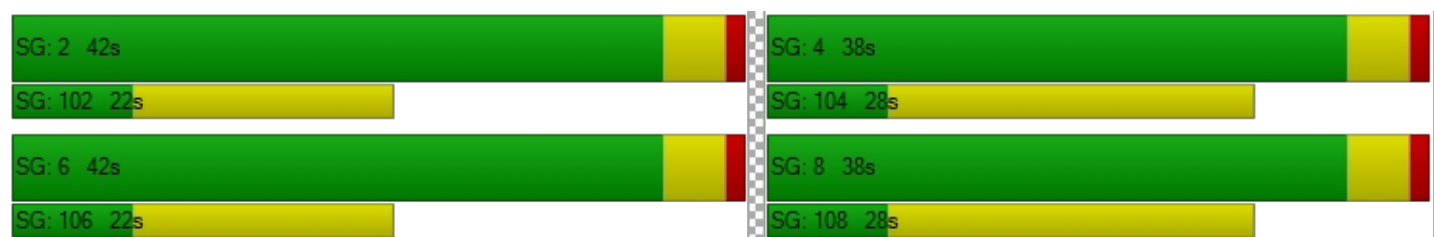


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.10	17.50	11.28	41.38	18.47	18.61	33.00	18.55	16.49	27.88	19.12	19.12
Movement LOS	C	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.35			20.46			21.62			20.97		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	19.68											
Intersection LOS	B											
Intersection V/C	0.539											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	170	90	160	180	80	60	560	70	20	420	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	170	90	160	180	80	60	560	70	20	420	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	52	27	49	55	25	16	147	18	5	114	8
Total Analysis Volume [veh/h]	24	206	109	197	221	98	63	587	73	22	457	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.02	0.18	0.33	0.37	0.16	0.07	0.18	0.18	0.03	0.26
s, saturation flow rate [veh/h]	1178	1757	600	600	600	914	1900	1801	782	1868
c, Capacity [veh/h]	91	602	195	206	206	411	1030	976	414	1013
d1, Uniform Delay [s]	39.94	21.02	25.58	26.25	20.62	18.05	10.18	10.21	14.13	11.35
k, delay calibration	0.11	0.11	0.40	0.48	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.52	0.71	59.87	82.98	1.71	0.79	0.84	0.91	0.24	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

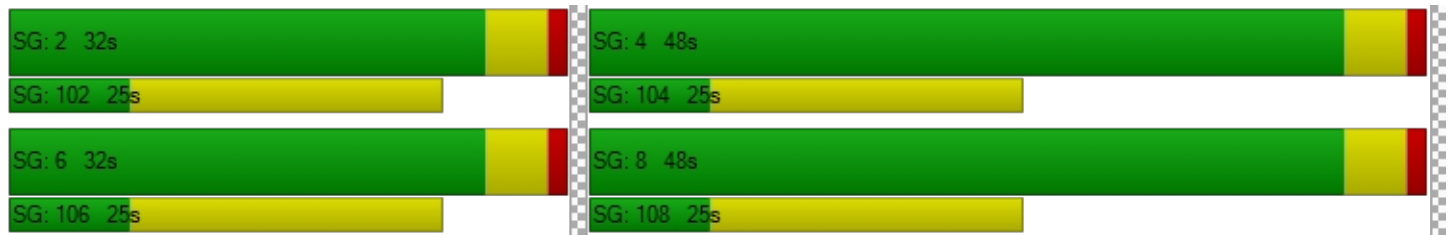
X, volume / capacity	0.26	0.52	1.01	1.07	0.48	0.15	0.33	0.33	0.05	0.48
d, Delay for Lane Group [s/veh]	41.45	21.72	85.44	109.23	22.33	18.84	11.02	11.13	14.38	13.01
Lane Group LOS	D	C	F	F	C	B	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.50	4.53	6.58	8.34	1.44	0.87	3.21	3.12	0.26	5.30
50th-Percentile Queue Length [ft]	12.42	113.15	164.39	208.38	36.07	21.73	80.33	78.09	6.43	132.52
95th-Percentile Queue Length [veh]	0.89	8.02	10.83	13.62	2.60	1.56	5.78	5.62	0.46	9.08
95th-Percentile Queue Length [ft]	22.35	200.38	270.83	340.44	64.93	39.11	144.59	140.56	11.58	226.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.45	21.72	21.72	85.44	109.23	22.33	18.84	11.07	11.13	14.38	13.01	13.01
Movement LOS	D	C	C	F	F	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	23.12			83.64			11.75			13.07		
Approach LOS	C			F			B			B		
d_I, Intersection Delay [s/veh]	31.67											
Intersection LOS	C											
Intersection V/C	0.631											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	850	140	120	890	170	60	500	100	100	570	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	850	140	120	890	170	60	500	100	100	570	30
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	233	38	31	229	44	16	132	26	30	172	9
Total Analysis Volume [veh/h]	44	931	153	124	917	175	63	529	106	121	687	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	63	63	73	64	64	38	25	25	38	29	29
g / C, Green / Cycle	0.61	0.52	0.52	0.61	0.54	0.54	0.32	0.21	0.21	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.07	0.29	0.30	0.18	0.29	0.30	0.07	0.17	0.18	0.11	0.19	0.19
s, saturation flow rate [veh/h]	640	1900	1781	671	1900	1769	877	1900	1724	1081	1900	1844
c, Capacity [veh/h]	370	996	933	387	1020	950	290	403	366	294	455	442
d1, Uniform Delay [s]	12.25	19.19	19.32	13.33	18.22	18.37	31.39	44.95	45.36	32.17	42.91	43.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	2.25	2.49	2.17	2.13	2.38	0.14	1.50	2.09	0.34	1.26	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.56	0.57	0.32	0.55	0.56	0.22	0.81	0.85	0.41	0.80	0.81
d, Delay for Lane Group [s/veh]	12.91	21.45	21.81	15.50	20.35	20.75	31.53	46.44	47.45	32.51	44.17	44.43
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.53	10.79	10.39	1.59	10.56	10.15	1.31	9.37	9.01	2.61	10.29	10.15
50th-Percentile Queue Length [ft]	13.15	269.74	259.85	39.69	264.04	253.66	32.81	234.22	225.19	65.34	257.18	253.87
95th-Percentile Queue Length [veh]	0.95	16.18	15.68	2.86	15.89	15.37	2.36	14.39	13.93	4.70	15.55	15.38
95th-Percentile Queue Length [ft]	23.67	404.41	392.03	71.44	397.28	384.26	59.06	359.72	348.24	117.60	388.68	384.52

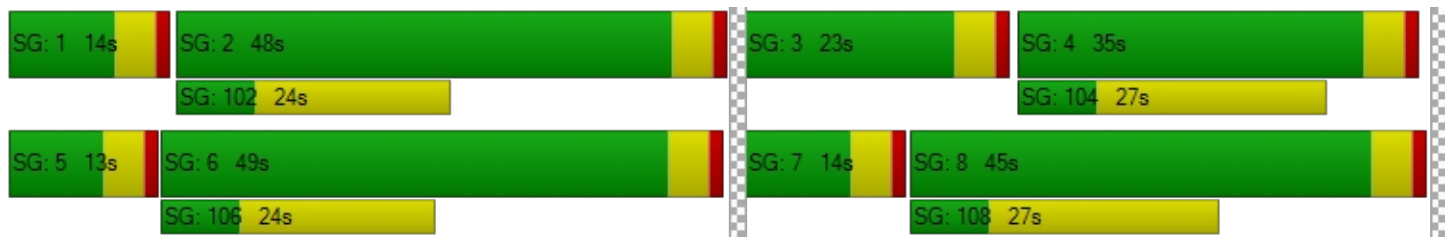


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.91	21.59	21.81	15.50	20.50	20.75	31.53	46.83	47.45	32.51	44.29	44.43
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	21.28			20.03			45.54			42.61		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.88											
Intersection LOS	C											
Intersection V/C	0.559											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	30	390	210	70	480	100	70	510	60	40	750	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	390	210	70	480	100	70	510	60	40	750	40
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	108	58	19	131	27	18	129	15	13	234	13
Total Analysis Volume [veh/h]	33	432	233	76	523	109	71	518	61	50	938	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.04	0.23	0.15	0.08	0.28	0.07	0.12	0.15	0.16	0.06	0.26	0.26
s, saturation flow rate [veh/h]	892	1900	1567	967	1900	1580	577	1900	1812	842	1900	1852
c, Capacity [veh/h]	321	908	749	384	908	755	189	742	708	316	742	723
d1, Uniform Delay [s]	20.71	12.34	11.20	19.13	13.15	10.24	28.85	15.37	15.41	20.73	17.61	17.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.10	0.10
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	1.79	1.08	1.16	2.66	0.40	0.46	0.13	0.14	0.09	0.97	1.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.48	0.31	0.20	0.58	0.14	0.38	0.40	0.40	0.16	0.67	0.68
d, Delay for Lane Group [s/veh]	21.35	14.12	12.28	20.28	15.81	10.64	29.31	15.50	15.55	20.81	18.58	18.71
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.45	4.38	2.15	1.00	5.74	0.91	1.13	3.15	3.06	0.63	6.26	6.18
50th-Percentile Queue Length [ft]	11.32	109.43	53.68	25.09	143.45	22.66	28.25	78.79	76.47	15.66	156.57	154.62
95th-Percentile Queue Length [veh]	0.82	7.81	3.87	1.81	9.67	1.63	2.03	5.67	5.51	1.13	10.37	10.26
95th-Percentile Queue Length [ft]	20.38	195.20	96.63	45.16	241.66	40.79	50.85	141.83	137.64	28.18	259.17	256.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.35	14.12	12.28	20.28	15.81	10.64	29.31	15.52	15.55	20.81	18.64	18.71
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.85			15.49			17.03			18.75		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.54											
Intersection LOS	B											
Intersection V/C	0.540											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	30	310	80	110	490	180	30	470	50	170	730	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	310	80	110	490	180	30	470	50	170	730	120
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	93	24	31	139	51	8	122	13	45	193	32
Total Analysis Volume [veh/h]	36	372	96	125	556	204	31	488	52	180	771	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.05	0.10	0.06	0.12	0.21	0.21	0.05	0.13	0.03	0.20	0.24	0.24
s, saturation flow rate [veh/h]	713	3618	1573	1020	1900	1685	628	3618	1533	909	1900	1790
c, Capacity [veh/h]	348	1818	791	533	955	847	182	1324	561	315	695	655
d1, Uniform Delay [s]	15.85	9.65	9.22	13.33	10.95	11.03	28.15	16.27	14.57	25.66	18.57	18.63
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.05	0.06
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.25	0.31	1.03	1.34	1.58	0.16	0.06	0.03	0.61	0.53	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.20	0.12	0.23	0.42	0.43	0.17	0.37	0.09	0.57	0.66	0.67
d, Delay for Lane Group [s/veh]	16.45	9.90	9.53	14.36	12.29	12.60	28.32	16.33	14.59	26.27	19.10	19.26
Lane Group LOS	B	A	A	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.44	1.52	0.79	1.34	3.77	3.50	0.47	2.68	0.51	2.75	5.84	5.60
50th-Percentile Queue Length [ft]	11.00	37.90	19.63	33.55	94.14	87.44	11.72	66.95	12.82	68.86	146.05	139.91
95th-Percentile Queue Length [veh]	0.79	2.73	1.41	2.42	6.78	6.30	0.84	4.82	0.92	4.96	9.81	9.48
95th-Percentile Queue Length [ft]	19.80	68.23	35.33	60.39	169.45	157.39	21.10	120.52	23.08	123.95	245.15	236.90

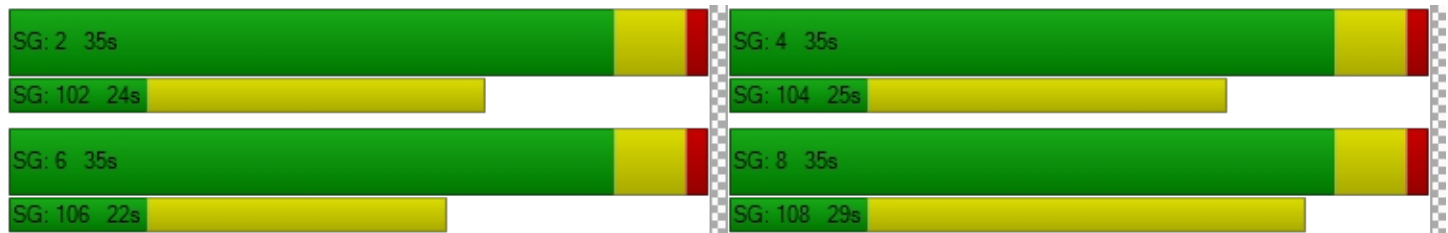


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.45	9.90	9.53	14.36	12.38	12.60	28.32	16.33	14.59	26.27	19.17	19.26
Movement LOS	B	A	A	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	10.30			12.71			16.82			20.36		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	15.80											
Intersection LOS	B											
Intersection V/C	0.460											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.579

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	50	480	70	320	620	60	100	330	200	190	760	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	480	70	320	620	60	100	330	200	190	760	60
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	134	19	84	163	16	27	88	53	59	235	19
Total Analysis Volume [veh/h]	56	534	78	336	652	63	106	350	212	235	941	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	64	47	47	64	53	53	46	29	29	46	35	35
g / C, Green / Cycle	0.53	0.39	0.39	0.54	0.45	0.45	0.39	0.24	0.24	0.39	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.06	0.16	0.17	0.19	0.19	0.19	0.13	0.16	0.17	0.20	0.27	0.27
s, saturation flow rate [veh/h]	897	1900	1800	1755	1900	1828	818	1900	1572	1183	1900	1844
c, Capacity [veh/h]	465	743	704	941	845	813	259	454	376	416	554	538
d1, Uniform Delay [s]	14.75	26.62	26.69	15.96	22.87	22.91	28.99	41.22	41.77	27.85	41.28	41.38
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.39	0.04	0.04	0.04	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	1.74	1.88	1.06	1.59	1.68	3.75	0.60	0.90	0.45	11.27	12.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

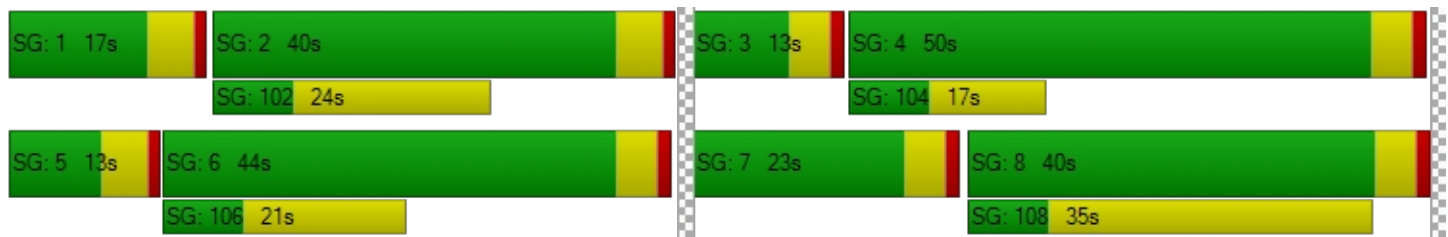
X, volume / capacity	0.12	0.42	0.43	0.36	0.43	0.43	0.41	0.66	0.70	0.56	0.93	0.93
d, Delay for Lane Group [s/veh]	15.28	28.36	28.57	17.02	24.47	24.59	32.74	41.82	42.67	28.30	52.55	53.74
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.88	7.36	7.11	6.05	7.98	7.77	2.25	8.02	7.23	4.80	16.33	16.13
50th-Percentile Queue Length [ft]	21.96	184.04	177.74	151.37	199.50	194.17	56.17	200.50	180.84	119.88	408.15	403.27
95th-Percentile Queue Length [veh]	1.58	11.81	11.48	10.09	12.61	12.34	4.04	12.66	11.64	8.39	22.95	22.72
95th-Percentile Queue Length [ft]	39.53	295.28	287.06	252.25	315.32	308.43	101.11	316.61	291.11	209.66	573.82	567.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.28	28.45	28.57	17.02	24.52	24.59	32.74	41.95	42.67	28.30	53.09	53.74
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	27.36			22.13			40.72			48.46		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.55											
Intersection LOS	D											
Intersection V/C	0.579											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach						
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	340	420	0	580	840	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	340	420	0	580	840	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	113	0	158	231	0
Total Analysis Volume [veh/h]	364	450	0	632	924	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.20	0.28	0.17	0.26
s, saturation flow rate [veh/h]	1810	1615	3618	3618
c, Capacity [veh/h]	511	456	2226	2226
d1, Uniform Delay [s]	28.96	32.07	8.05	8.92
k, delay calibration	0.17	0.40	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.97	34.81	0.32	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.71	0.99	0.28	0.42
d, Delay for Lane Group [s/veh]	31.93	66.88	8.37	9.50
Lane Group LOS	C	E	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	6.76	13.08	2.67	4.35
50th-Percentile Queue Length [ft]	168.91	327.02	66.79	108.65
95th-Percentile Queue Length [veh]	11.02	19.01	4.81	7.77
95th-Percentile Queue Length [ft]	275.48	475.31	120.23	194.13

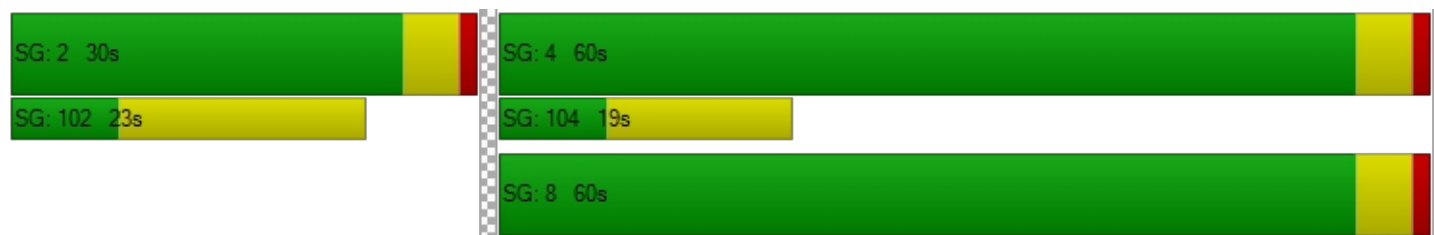


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.93	66.88	0.00	8.37	9.50	0.00
Movement LOS	C	E		A	A	
d_A, Approach Delay [s/veh]	51.25		8.37		9.50	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	23.54					
Intersection LOS	C					
Intersection V/C	0.534					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	50	100	80	10	30	30	20	460	20	18	1220	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	100	80	10	30	30	20	460	20	18	1220	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	34	27	3	10	10	6	128	6	5	333	19
Total Analysis Volume [veh/h]	67	135	108	14	41	41	22	514	22	18	1332	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62	62	62	62
g / C, Green / Cycle	0.21	0.21	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.06	0.14	0.14	0.37	0.38
s, saturation flow rate [veh/h]	1683	1607	388	1900	1872	1900	1858
c, Capacity [veh/h]	398	379	264	1311	1292	1311	1282
d1, Uniform Delay [s]	34.36	29.84	13.22	5.03	5.03	6.85	6.95
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	0.13	0.62	0.36	0.36	1.58	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

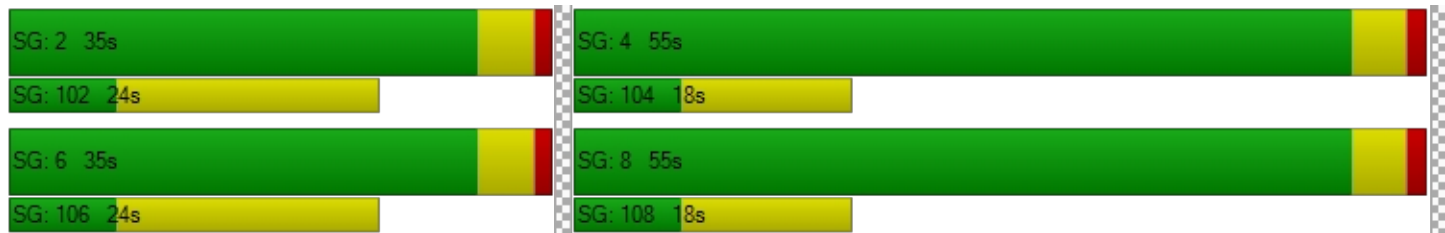
X, volume / capacity	0.78	0.25	0.08	0.21	0.21	0.54	0.55
d, Delay for Lane Group [s/veh]	35.66	29.97	13.84	5.38	5.39	8.43	8.64
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.46	1.71	0.29	1.66	1.64	6.02	6.12
50th-Percentile Queue Length [ft]	161.49	42.67	7.13	41.45	41.04	150.45	153.02
95th-Percentile Queue Length [veh]	10.63	3.07	0.51	2.98	2.95	10.04	10.18
95th-Percentile Queue Length [ft]	265.69	76.81	12.83	74.62	73.86	251.03	254.46

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.66	35.66	35.66	29.97	29.97	29.97	13.84	5.39	5.39	0.00	8.53	8.64
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.66			29.97			5.72			8.54		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	12.29											
Intersection LOS	B											
Intersection V/C	0.563											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	84.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	70	900	110	90	810	240	20	200	50	510	460	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	900	110	90	810	240	20	200	50	510	460	170
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	239	29	23	205	61	6	56	14	141	127	47
Total Analysis Volume [veh/h]	74	956	117	91	818	242	22	223	56	565	509	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	32	23	23	32	22	22	23	23	23	48	48	58
g / C, Green / Cycle	0.36	0.26	0.26	0.36	0.25	0.25	0.26	0.26	0.26	0.54	0.54	0.65
(v / s)_j Volume / Saturation Flow Rate	0.09	0.29	0.31	0.11	0.29	0.32	0.02	0.07	0.08	0.39	0.27	0.12
s, saturation flow rate [veh/h]	855	1900	1722	818	1900	1598	895	1900	1692	1446	1900	1556
c, Capacity [veh/h]	293	489	444	277	472	397	143	495	441	827	1022	1010
d1, Uniform Delay [s]	22.38	33.43	33.43	22.83	33.85	33.85	39.92	26.60	26.78	14.34	13.13	6.30
k, delay calibration	0.50	0.50	0.50	0.10	0.50	0.50	0.04	0.04	0.04	0.19	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	76.54	104.64	0.66	95.80	145.28	0.18	0.12	0.15	1.77	0.14	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	1.12	1.19	0.33	1.17	1.28	0.15	0.29	0.31	0.68	0.50	0.19
d, Delay for Lane Group [s/veh]	24.44	109.98	138.08	23.50	129.65	179.13	40.10	26.72	26.92	16.11	13.27	6.33
Lane Group LOS	C	F	F	C	F	F	D	C	C	B	B	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.16	20.59	22.13	1.29	22.41	24.30	0.46	2.38	2.31	7.54	6.07	1.27
50th-Percentile Queue Length [ft]	29.06	514.71	553.19	32.16	560.14	607.59	11.55	59.50	57.78	188.41	151.84	31.77
95th-Percentile Queue Length [veh]	2.09	29.88	32.82	2.32	32.88	36.87	0.83	4.28	4.16	12.04	10.12	2.29
95th-Percentile Queue Length [ft]	52.30	746.97	820.50	57.88	821.95	921.81	20.79	107.10	104.00	300.96	252.88	57.18

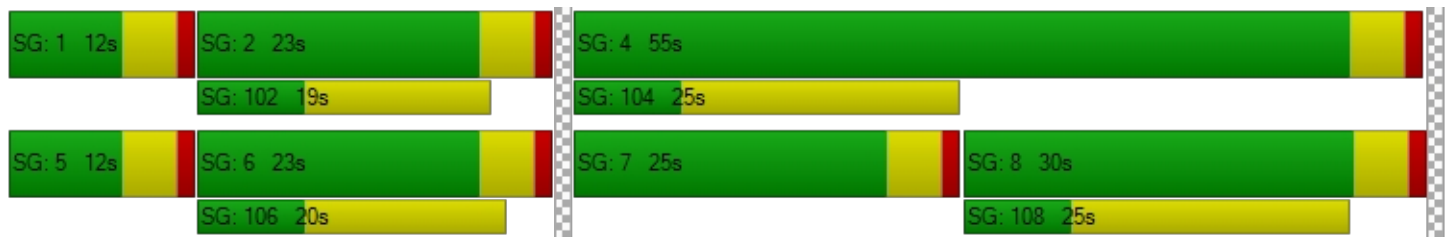


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.44	122.01	138.08	23.50	145.82	179.13	40.10	26.79	26.92	16.11	13.27	6.33
Movement LOS	C	F	F	C	F	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	117.36			143.15			27.79			13.51		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	84.12											
Intersection LOS	F											
Intersection V/C	0.654											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1210	60	30	1090	60	70	120	30	60	60	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1210	60	30	1090	60	70	120	30	60	60	60
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	313	16	8	284	16	21	37	9	19	19	19
Total Analysis Volume [veh/h]	62	1253	62	31	1135	62	86	147	37	75	75	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	19	19
g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.64	0.64	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.13	0.35	0.35	0.07	0.32	0.32	0.19	0.17
s, saturation flow rate [veh/h]	474	1900	1855	424	1900	1852	1434	1333
c, Capacity [veh/h]	305	1220	1192	271	1220	1190	407	384
d1, Uniform Delay [s]	13.80	7.85	7.89	14.17	7.50	7.53	28.02	26.94
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.50	1.73	1.82	0.86	1.43	1.50	0.69	0.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.20	0.54	0.55	0.11	0.49	0.50	0.66	0.59
d, Delay for Lane Group [s/veh]	15.30	9.58	9.71	15.02	8.93	9.02	28.72	27.48
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.77	5.52	5.49	0.39	4.78	4.73	4.66	3.72
50th-Percentile Queue Length [ft]	19.35	137.88	137.19	9.67	119.40	118.20	116.42	93.03
95th-Percentile Queue Length [veh]	1.39	9.37	9.33	0.70	8.36	8.29	8.20	6.70
95th-Percentile Queue Length [ft]	34.84	234.16	233.24	17.40	209.00	207.36	204.89	167.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.30	9.64	9.71	15.02	8.97	9.02	28.72	28.72	28.72	27.48	27.48	27.48
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.90			9.13			28.72			27.48		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.51											
Intersection LOS	B											
Intersection V/C	0.540											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	20	1030	20	20	1100	220	70	68	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	20	1030	20	20	1100	220	70	68	30
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	5	265	5	5	289	58	20	22	9
Total Analysis Volume [veh/h]	0	0	0	21	1060	21	21	1158	232	82	89	35
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0	
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0	
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	C	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		98	98	98	98	98	98	13	13
g / C, Green / Cycle		0.82	0.82	0.82	0.82	0.82	0.82	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate		0.05	0.29	0.29	0.04	0.37	0.38	0.09	0.02
s, saturation flow rate [veh/h]		395	1900	1884	530	1900	1776	1856	1480
c, Capacity [veh/h]		328	1549	1536	441	1549	1448	200	160
d1, Uniform Delay [s]		6.53	2.86	2.86	4.92	3.27	3.31	52.50	48.82
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.37	0.62	0.63	0.20	0.98	1.09	3.99	0.25
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.06	0.35	0.35	0.05	0.46	0.47	0.85	0.22
d, Delay for Lane Group [s/veh]		6.90	3.48	3.49	5.13	4.25	4.40	56.49	49.07
Lane Group LOS		A	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.21	2.75	2.74	0.17	4.40	4.28	5.23	0.96
50th-Percentile Queue Length [ft]		5.19	68.81	68.45	4.29	110.02	107.04	130.76	24.11
95th-Percentile Queue Length [veh]		0.37	4.95	4.93	0.31	7.84	7.68	8.98	1.74
95th-Percentile Queue Length [ft]		9.34	123.86	123.20	7.72	196.02	191.88	224.52	43.40



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	6.90	3.49	3.49	5.13	4.31	4.40	56.49	56.49	49.07
Movement LOS				A	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			3.55			4.33			55.23		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	7.87											
Intersection LOS	A											
Intersection V/C	0.474											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1150	170	140	1050	20	140	10	120	10	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1150	170	140	1050	20	140	10	120	10	0	0
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	293	43	36	273	5	40	3	34	4	0	0
Total Analysis Volume [veh/h]	10	1172	173	145	1091	21	159	11	136	15	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	90	90	90	13	13	3
g / C, Green / Cycle	0.65	0.65	0.75	0.75	0.75	0.11	0.11	0.02
(v / s)_j Volume / Saturation Flow Rate	0.38	0.39	0.26	0.29	0.29	0.09	0.09	0.01
s, saturation flow rate [veh/h]	1874	1621	561	1900	1886	1815	1547	1810
c, Capacity [veh/h]	1256	1060	415	1426	1415	202	172	42
d1, Uniform Delay [s]	11.56	11.82	9.07	5.29	5.29	52.26	51.93	57.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	2.51	2.31	0.81	0.82	3.62	3.06	1.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

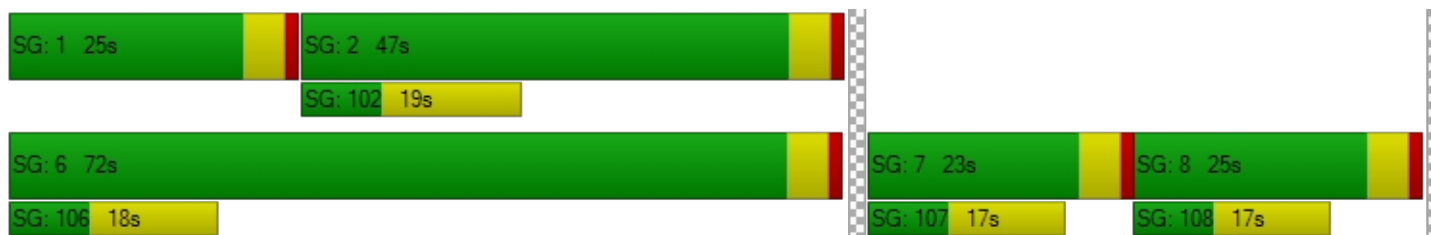
X, volume / capacity	0.57	0.60	0.35	0.39	0.39	0.84	0.79	0.36
d, Delay for Lane Group [s/veh]	13.46	14.34	11.38	6.10	6.11	55.89	54.99	59.56
Lane Group LOS	B	B	B	A	A	E	D	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	10.39	9.55	1.09	4.43	4.40	5.26	4.17	0.47
50th-Percentile Queue Length [ft]	259.79	238.65	27.15	110.64	110.09	131.50	104.15	11.68
95th-Percentile Queue Length [veh]	15.68	14.61	1.95	7.88	7.85	9.02	7.50	0.84
95th-Percentile Queue Length [ft]	391.96	365.32	48.87	196.89	196.13	225.53	187.47	21.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.46	13.80	14.34	11.38	6.10	6.11	55.89	55.89	54.99	59.56	59.56	59.56
Movement LOS	B	B	B	B	A	A	E	E	D	E	E	E
d_A, Approach Delay [s/veh]	13.87			6.71			55.49			59.56		
Approach LOS	B			A			E			E		
d_I, Intersection Delay [s/veh]	15.38											
Intersection LOS	B											
Intersection V/C	0.521											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	530	90	210	680	20	120	290	80	30	250	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	530	90	210	680	20	120	290	80	30	250	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	147	25	57	183	5	34	82	23	9	72	3
Total Analysis Volume [veh/h]	0	589	100	226	732	22	135	327	90	35	289	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	54	54	27	27	27	27	27
g / C, Green / Cycle	0.47	0.60	0.60	0.30	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.37	0.24	0.40	0.12	0.23	0.04	0.15	0.01
s, saturation flow rate [veh/h]	1838	955	1888	1104	1822	985	1900	1550
c, Capacity [veh/h]	861	454	1131	239	544	140	568	463
d1, Uniform Delay [s]	20.35	14.45	12.05	37.58	28.68	41.17	26.08	22.29
k, delay calibration	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.73	3.87	3.12	0.79	3.24	0.35	0.26	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.80	0.50	0.67	0.57	0.77	0.25	0.51	0.03
d, Delay for Lane Group [s/veh]	28.08	18.32	15.17	38.37	31.92	41.51	26.34	22.29
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	13.10	2.22	9.40	2.90	8.40	0.77	5.10	0.18
50th-Percentile Queue Length [ft]	327.50	55.48	234.97	72.44	209.92	19.21	127.56	4.52
95th-Percentile Queue Length [veh]	19.04	3.99	14.43	5.22	13.15	1.38	8.81	0.33
95th-Percentile Queue Length [ft]	475.89	99.87	360.67	130.38	328.73	34.58	220.17	8.13

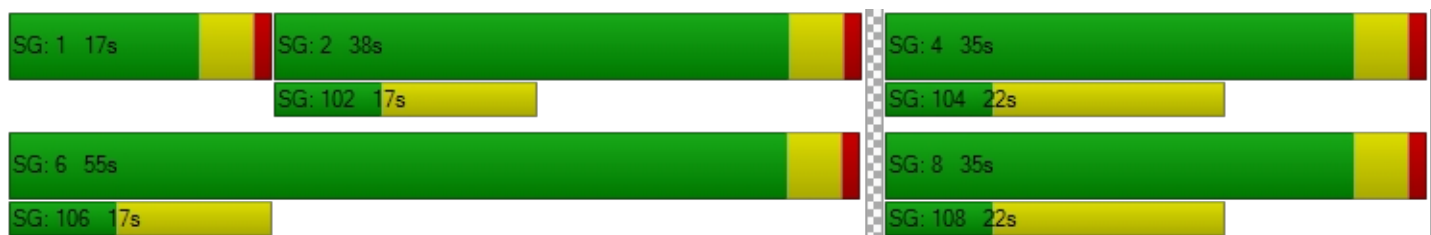


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	28.08	28.08	18.32	15.17	15.17	38.37	31.92	31.92	41.51	26.34	22.29
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		28.08		15.90			33.49			27.78		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]	24.54											
Intersection LOS	C											
Intersection V/C	0.667											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.365

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	610	540	10	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	610	540	10	10	20
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	160	147	3	4	8
Total Analysis Volume [veh/h]	21	640	588	11	16	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	2
g / C, Green / Cycle	0.47	0.47	0.47	0.08
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.32	0.03
s, saturation flow rate [veh/h]	830	1900	1893	1676
c, Capacity [veh/h]	463	884	880	145
d1, Uniform Delay [s]	7.87	4.43	4.30	8.81
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.35	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

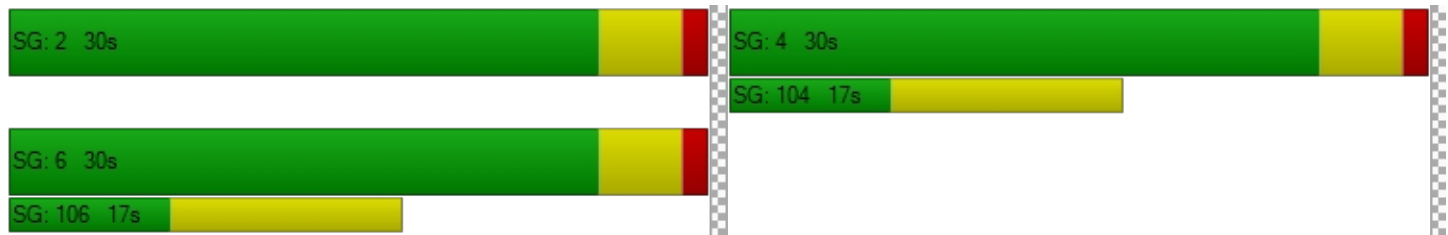
X, volume / capacity	0.05	0.72	0.68	0.32
d, Delay for Lane Group [s/veh]	7.89	4.86	4.64	9.28
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.46	0.41	0.12
50th-Percentile Queue Length [ft]	1.26	11.62	10.30	3.04
95th-Percentile Queue Length [veh]	0.09	0.84	0.74	0.22
95th-Percentile Queue Length [ft]	2.27	20.92	18.53	5.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.89	4.86	4.64	4.64	9.28	9.28
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.95		4.64		9.28	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.97					
Intersection LOS	A					
Intersection V/C	0.365					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	920	270	100	970	460	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	920	270	100	970	460	170
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	245	72	28	267	135	50
Total Analysis Volume [veh/h]	982	288	110	1068	541	200
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	76	76	9	90	21	21
g / C, Green / Cycle	0.64	0.64	0.08	0.75	0.17	0.17
(v / s)_j Volume / Saturation Flow Rate	0.33	0.36	0.06	0.30	0.15	0.13
s, saturation flow rate [veh/h]	1900	1750	1810	3618	3514	1539
c, Capacity [veh/h]	1207	1112	136	2708	614	269
d1, Uniform Delay [s]	11.97	12.51	54.61	5.37	48.26	46.93
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	2.13	4.34	0.43	1.70	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.53	0.57	0.81	0.39	0.88	0.74
d, Delay for Lane Group [s/veh]	13.62	14.65	58.95	5.81	49.96	48.48
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	9.61	10.13	3.43	4.33	8.01	5.77
50th-Percentile Queue Length [ft]	240.33	253.20	85.87	108.19	200.30	144.29
95th-Percentile Queue Length [veh]	14.70	15.35	6.18	7.74	12.65	9.71
95th-Percentile Queue Length [ft]	367.45	383.68	154.57	193.48	316.35	242.79



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.98	14.65	58.95	5.81	49.96	48.48
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	14.13		10.77		49.56	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	21.12					
Intersection LOS	C					
Intersection V/C	0.578					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	30	370	100	80	300	10	260	680	100	20	340	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	370	100	80	300	10	260	680	100	20	340	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	104	28	24	90	3	76	198	29	6	103	3
Total Analysis Volume [veh/h]	34	418	113	96	360	12	302	790	116	24	412	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.42	0.42	0.42	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.03	0.22	0.07	0.10	0.19	0.01	0.24	0.24	0.25	0.04	0.11	0.11
s, saturation flow rate [veh/h]	1031	1900	1538	973	1900	1567	1262	1900	1765	619	1900	1864
c, Capacity [veh/h]	396	843	683	352	843	695	595	808	751	121	479	470
d1, Uniform Delay [s]	18.61	13.93	11.73	21.54	13.41	10.95	14.41	15.34	15.50	34.36	22.14	22.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.05	0.06	0.08	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	2.08	0.52	1.90	1.58	0.05	0.34	0.37	0.54	0.30	0.24	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

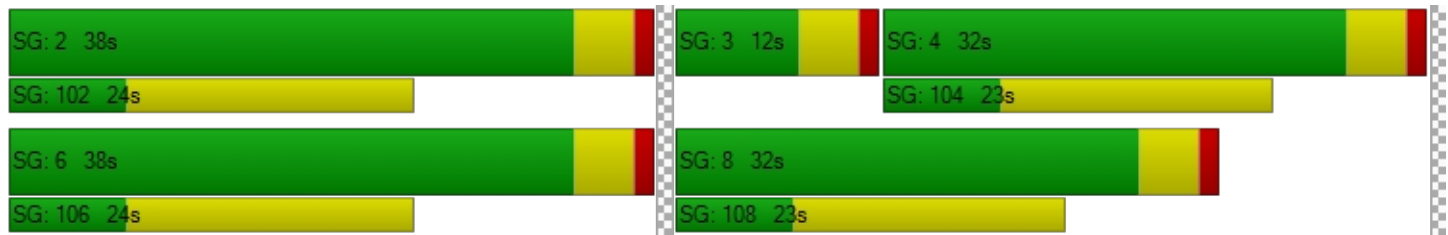
X, volume / capacity	0.09	0.50	0.17	0.27	0.43	0.02	0.51	0.57	0.59	0.20	0.44	0.45
d, Delay for Lane Group [s/veh]	19.04	16.01	12.25	23.44	14.99	11.00	14.75	15.72	16.04	34.66	22.38	22.42
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.43	4.62	1.04	1.40	3.80	0.10	3.07	5.18	5.04	0.41	2.83	2.82
50th-Percentile Queue Length [ft]	10.69	115.56	26.00	34.93	94.94	2.55	76.86	129.38	126.03	10.21	70.78	70.41
95th-Percentile Queue Length [veh]	0.77	8.15	1.87	2.52	6.84	0.18	5.53	8.91	8.72	0.73	5.10	5.07
95th-Percentile Queue Length [ft]	19.25	203.71	46.81	62.88	170.89	4.59	138.34	222.66	218.09	18.37	127.40	126.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.04	16.01	12.25	23.44	14.99	11.00	14.75	15.85	16.04	34.66	22.40	22.42
Movement LOS	B	B	B	C	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.44			16.62			15.59			23.06		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.98											
Intersection LOS	B											
Intersection V/C	0.471											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	30	350	260	210	510	150	280	840	90	30	550	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	350	260	210	510	150	280	840	90	30	550	20
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	102	76	60	147	43	78	233	25	8	154	6
Total Analysis Volume [veh/h]	35	408	303	242	587	173	311	933	100	34	617	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	22	58	14	31	31	12	61	79	5	53	53
g / C, Green / Cycle	0.04	0.18	0.48	0.12	0.26	0.26	0.10	0.51	0.66	0.04	0.44	0.44
(v / s)_j Volume / Saturation Flow Rate	0.02	0.11	0.19	0.09	0.21	0.21	0.09	0.26	0.06	0.02	0.17	0.17
s, saturation flow rate [veh/h]	1810	3618	1565	2796	1900	1724	3514	3618	1574	1810	1900	1872
c, Capacity [veh/h]	73	662	754	343	496	450	365	1828	1042	72	838	826
d1, Uniform Delay [s]	56.31	45.13	19.96	53.05	41.36	41.54	52.84	19.78	7.31	56.35	22.53	22.55
k, delay calibration	0.04	0.04	0.12	0.04	0.05	0.06	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	0.35	0.40	1.00	1.50	2.05	2.21	1.02	0.01	1.77	1.33	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.48	0.62	0.40	0.71	0.80	0.81	0.85	0.51	0.10	0.47	0.38	0.38
d, Delay for Lane Group [s/veh]	58.10	45.48	20.35	54.06	42.85	43.60	55.05	20.80	7.32	58.13	23.86	23.91
Lane Group LOS	E	D	C	D	D	D	E	C	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.08	5.63	5.48	3.63	11.05	10.31	4.72	8.82	0.90	1.04	6.39	6.34
50th-Percentile Queue Length [ft]	26.88	140.76	137.11	90.80	276.22	257.69	117.91	220.38	22.44	26.11	159.87	158.38
95th-Percentile Queue Length [veh]	1.94	9.52	9.33	6.54	16.50	15.57	8.28	13.68	1.62	1.88	10.54	10.46
95th-Percentile Queue Length [ft]	48.38	238.05	233.13	163.44	412.50	389.32	206.95	342.12	40.40	47.01	263.55	261.58



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.10	45.48	20.35	54.06	43.10	43.60	55.05	20.80	7.32	58.13	23.88	23.91
Movement LOS	E	D	C	D	D	D	E	C	A	E	C	C
d_A, Approach Delay [s/veh]	35.87			45.83			27.72			25.61		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	33.78											
Intersection LOS	C											
Intersection V/C	0.556											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	55.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	670	80	490	1260	40	100	1070	20	120	900	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	670	80	490	1260	40	100	1070	20	120	900	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	188	22	125	322	10	30	317	6	33	244	16
Total Analysis Volume [veh/h]	67	750	90	501	1288	41	118	1266	24	130	978	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	36	36	15	46	46	6	44	44	6	44	44
g / C, Green / Cycle	0.05	0.30	0.30	0.13	0.38	0.38	0.05	0.36	0.36	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.21	0.06	0.14	0.36	0.03	0.03	0.23	0.24	0.04	0.38	0.39
s, saturation flow rate [veh/h]	1810	3618	1536	3514	3618	1543	3514	3618	1874	3514	1800	900
c, Capacity [veh/h]	87	1088	462	451	1379	588	175	1318	683	187	662	331
d1, Uniform Delay [s]	56.47	37.00	31.16	52.28	35.66	23.59	56.05	31.65	31.69	55.84	37.91	37.91
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	1.12	0.29	52.81	4.88	0.07	1.71	2.43	4.68	1.76	46.88	67.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

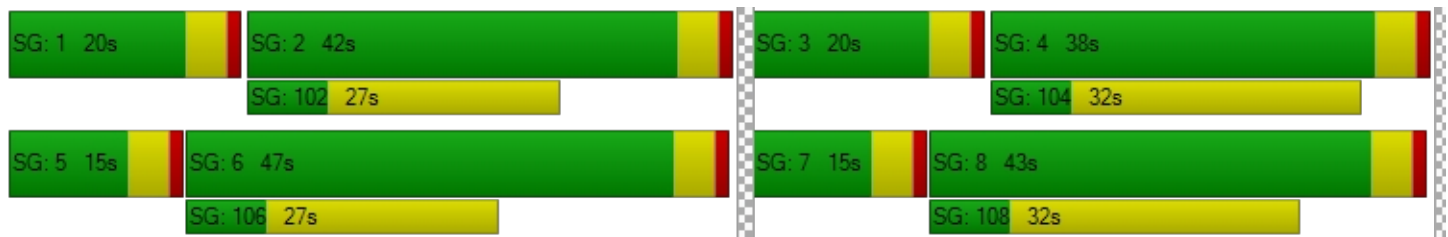
X, volume / capacity	0.77	0.69	0.19	1.11	0.93	0.07	0.68	0.64	0.65	0.70	1.04	1.06
d, Delay for Lane Group [s/veh]	61.89	38.12	31.45	105.09	40.54	23.66	57.75	34.08	36.38	57.60	84.80	105.01
Lane Group LOS	E	D	C	F	D	C	E	C	D	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	10.46	2.12	9.90	17.97	0.73	1.80	10.59	11.46	1.98	13.84	15.70
50th-Percentile Queue Length [ft]	55.78	261.42	52.90	247.58	449.29	18.23	44.98	264.86	286.58	49.53	346.05	392.53
95th-Percentile Queue Length [veh]	4.02	15.76	3.81	15.74	24.92	1.31	3.24	15.93	17.02	3.57	20.51	23.10
95th-Percentile Queue Length [ft]	100.41	394.01	95.23	393.46	623.10	32.81	80.96	398.31	425.39	89.15	512.65	577.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	38.12	31.45	105.09	40.54	23.66	57.75	34.84	36.38	57.60	90.73	105.01
Movement LOS	E	D	C	F	D	C	E	C	D	E	F	F
d_A, Approach Delay [s/veh]	39.22			57.83			36.78			87.85		
Approach LOS	D			E			D			F		
d_I, Intersection Delay [s/veh]	55.71											
Intersection LOS	E											
Intersection V/C	0.818											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	10	190	70	10	60	50	1420	10	20	1460	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	10	190	70	10	60	50	1420	10	20	1460	20
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	4	68	23	3	20	13	363	3	5	384	5
Total Analysis Volume [veh/h]	86	14	273	92	13	79	51	1451	10	21	1536	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	23	6	80	80	4	78	78
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.05	0.67	0.67	0.03	0.65	0.65
(v / s)_j Volume / Saturation Flow Rate	0.07	0.01	0.17	0.07	0.06	0.03	0.27	0.27	0.01	0.57	0.59
s, saturation flow rate [veh/h]	1317	1900	1571	1404	1617	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	223	360	297	293	306	87	2408	1260	54	1165	583
d1, Uniform Delay [s]	49.17	39.65	47.63	44.58	41.73	55.82	9.11	9.11	57.01	17.26	18.30
k, delay calibration	0.04	0.04	0.08	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.02	9.11	0.61	0.54	2.31	0.49	0.94	1.68	9.49	21.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.04	0.92	0.31	0.30	0.59	0.40	0.40	0.39	0.88	0.92
d, Delay for Lane Group [s/veh]	49.57	39.66	56.74	45.19	42.27	58.14	9.61	10.06	58.69	26.75	39.80
Lane Group LOS	D	D	E	D	D	E	A	B	E	C	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.42	0.34	8.64	2.48	2.37	1.57	5.55	5.97	0.65	12.04	15.10
50th-Percentile Queue Length [ft]	60.53	8.46	215.99	61.90	59.37	39.21	138.78	149.21	16.26	301.10	377.59
95th-Percentile Queue Length [veh]	4.36	0.61	13.46	4.46	4.27	2.82	9.42	9.97	1.17	17.74	21.48
95th-Percentile Queue Length [ft]	108.96	15.22	336.50	111.42	106.87	70.58	235.38	249.37	29.27	443.39	536.93



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.57	39.66	56.74	45.19	42.27	42.27	58.14	9.76	10.06	58.69	31.11	39.80
Movement LOS	D	D	E	D	D	D	E	A	B	E	C	D
d_A, Approach Delay [s/veh]	54.45			43.73			11.39			31.59		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]	26.17											
Intersection LOS	C											
Intersection V/C	0.795											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.916

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	590	1240	310	0	0	1800
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	590	1240	310	0	0	1800
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	320	83	0	0	483
Total Analysis Volume [veh/h]	609	1279	330	0	0	1932
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	25	95	16	86
g / C, Green / Cycle	0.21	0.79	0.13	0.71
(v / s)_i Volume / Saturation Flow Rate	0.17	0.45	0.09	0.74
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	740	2239	469	1853
d1, Uniform Delay [s]	45.21	4.67	50.00	17.24
k, delay calibration	0.04	0.34	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	0.72	0.73	33.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

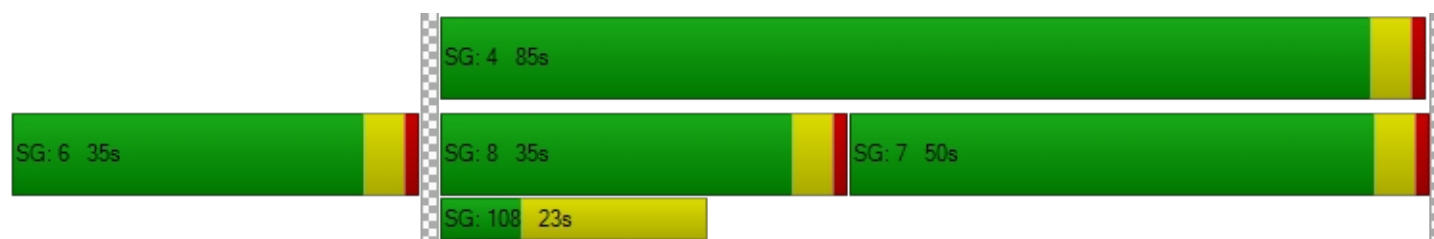
X, volume / capacity	0.82	0.57	0.70	1.04
d, Delay for Lane Group [s/veh]	46.10	5.39	50.72	50.27
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	8.31	3.57	4.79	15.02
50th-Percentile Queue Length [ft]	207.63	89.14	119.76	375.47
95th-Percentile Queue Length [veh]	13.03	6.42	8.38	22.12
95th-Percentile Queue Length [ft]	325.79	160.45	209.49	552.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	46.10	5.39	50.72	0.00	0.00	50.27
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	18.52		50.72		50.27	
Approach LOS	B		D		D	
d_I, Intersection Delay [s/veh]	35.86					
Intersection LOS	D					
Intersection V/C	0.916					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.018

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	50	0	0	0	0	310	210	960	1440	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	50	0	0	0	0	310	210	960	1440	0
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	14	0	0	0	0	95	64	256	384	0
Total Analysis Volume [veh/h]	0	0	58	0	0	0	0	379	257	1024	1535	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			22	22	89	115	115
g / C, Green / Cycle			0.19	0.19	0.74	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.10	0.17	0.85	0.40	0.40
s, saturation flow rate [veh/h]			3618	1557	1200	1900	1900
c, Capacity [veh/h]			670	288	886	1827	1827
d1, Uniform Delay [s]			44.46	47.67	15.70	0.15	0.15
k, delay calibration			0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.28	3.80	83.01	0.71	0.71
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity			0.57	0.89	1.16	0.42	0.42
d, Delay for Lane Group [s/veh]			44.74	51.47	98.72	0.86	0.86
Lane Group LOS			D	D	F	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			5.16	7.77	20.10	0.36	0.36
50th-Percentile Queue Length [ft]			129.03	194.27	502.48	9.03	9.03
95th-Percentile Queue Length [veh]			8.89	12.34	30.75	0.65	0.65
95th-Percentile Queue Length [ft]			222.17	308.57	768.67	16.25	16.25

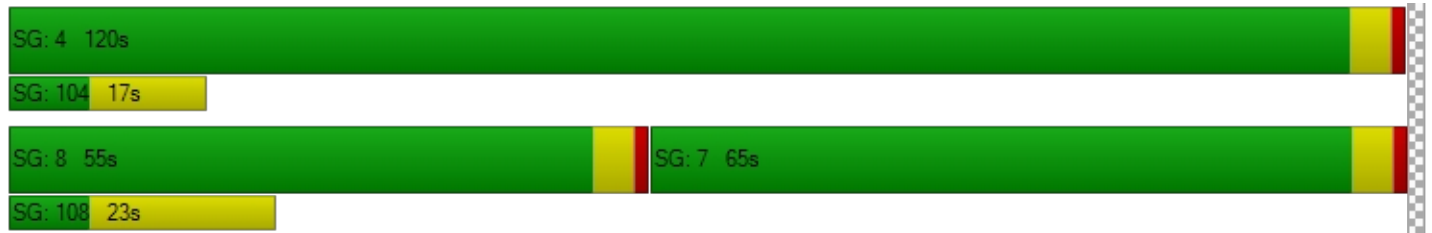


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.74	51.47	98.72	0.86	0.86
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			47.46			40.02		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	41.50											
Intersection LOS	D											
Intersection V/C	1.018											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┤			┼								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	50	40	20	30	30	20	510	23	60	1290	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	50	40	20	30	30	20	510	23	60	1290	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	16	13	7	11	11	6	148	6	16	343	0
Total Analysis Volume [veh/h]	19	65	52	29	44	44	23	590	24	64	1371	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	93	93	93	93
g / C, Green / Cycle	0.15	0.15	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.07	0.09	0.19	0.18	0.42	0.41
s, saturation flow rate [veh/h]	1684	1232	1580	1729	1752	1729
c, Capacity [veh/h]	251	221	1256	1339	1389	1339
d1, Uniform Delay [s]	46.67	47.66	3.61	3.74	4.95	5.16
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.73	0.44	0.42	1.42	1.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

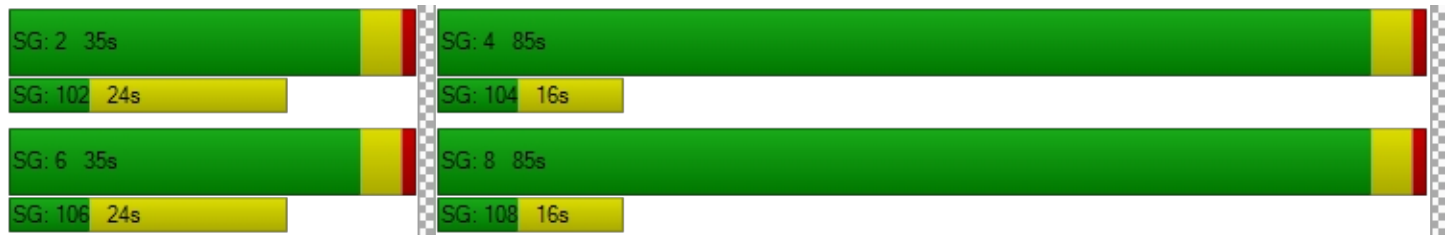
X, volume / capacity	0.47	0.53	0.24	0.24	0.52	0.53
d, Delay for Lane Group [s/veh]	47.17	48.39	4.06	4.15	6.37	6.65
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.21	3.37	1.78	1.96	6.03	6.10
50th-Percentile Queue Length [ft]	80.21	84.16	44.54	48.89	150.75	152.46
95th-Percentile Queue Length [veh]	5.78	6.06	3.21	3.52	10.06	10.15
95th-Percentile Queue Length [ft]	144.38	151.48	80.17	88.00	251.42	253.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.17	47.17	48.39	48.39	48.39	4.06	4.11	0.00	6.37	6.51	6.65
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		47.17		48.39			4.11			6.51		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	10.09											
Intersection LOS	B											
Intersection V/C	0.511											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	280	950	20	30	640	80	30	150	20	320	380	610
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	280	950	20	30	640	80	30	150	20	320	380	610
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	72	245	5	8	172	22	9	44	6	85	100	161
Total Analysis Volume [veh/h]	289	979	21	32	689	86	35	177	24	338	401	644
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	59	59	3	29	29	27	27	27	44	44	82
g / C, Green / Cycle	0.28	0.49	0.49	0.03	0.24	0.24	0.23	0.23	0.23	0.37	0.37	0.68
(v / s)_j Volume / Saturation Flow Rate	0.08	0.26	0.27	0.02	0.21	0.21	0.04	0.09	0.02	0.24	0.21	0.41
s, saturation flow rate [veh/h]	3514	1900	1879	1810	1900	1788	992	1900	1508	1424	1900	1578
c, Capacity [veh/h]	969	927	917	50	455	428	102	433	344	519	702	1079
d1, Uniform Delay [s]	34.27	21.39	21.43	57.72	43.79	44.06	57.02	39.44	36.34	31.03	30.21	10.13
k, delay calibration	0.50	0.50	0.50	0.04	0.28	0.29	0.04	0.04	0.04	0.14	0.08	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	2.27	2.31	4.95	11.91	14.94	0.74	0.23	0.03	1.77	0.51	2.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.54	0.54	0.64	0.87	0.89	0.34	0.41	0.07	0.65	0.57	0.60
d, Delay for Lane Group [s/veh]	35.06	23.66	23.74	62.68	55.71	58.99	57.75	39.67	36.37	32.80	30.72	12.56
Lane Group LOS	D	C	C	E	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.42	10.10	10.06	1.02	12.59	12.51	1.07	4.44	0.55	7.79	9.31	9.06
50th-Percentile Queue Length [ft]	85.42	252.53	251.45	25.58	314.71	312.76	26.64	111.05	13.86	194.64	232.75	226.40
95th-Percentile Queue Length [veh]	6.15	15.31	15.26	1.84	18.41	18.31	1.92	7.90	1.00	12.36	14.31	13.99
95th-Percentile Queue Length [ft]	153.75	382.84	381.48	46.05	460.18	457.78	47.95	197.46	24.96	309.04	357.85	349.79

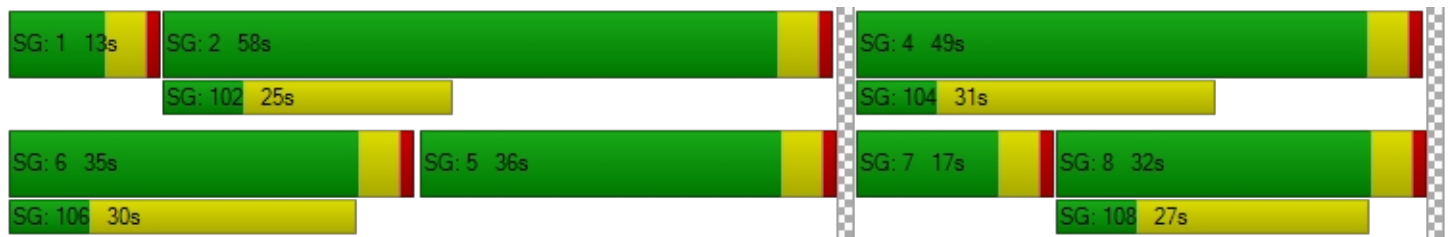


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.06	23.70	23.74	62.68	57.11	58.99	57.75	39.67	36.37	32.80	30.72	12.56
Movement LOS	D	C	C	E	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	26.25			57.53			42.01			22.77		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	32.75											
Intersection LOS	C											
Intersection V/C	0.697											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	60	560	600	90	180	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	560	600	90	180	160
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	151	161	24	49	44
Total Analysis Volume [veh/h]	65	604	645	97	197	175
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	77	77	68	68	14	14
g / C, Green / Cycle	0.77	0.77	0.68	0.68	0.14	0.14
(v / s)_j Volume / Saturation Flow Rate	0.07	0.32	0.34	0.06	0.11	0.11
s, saturation flow rate [veh/h]	887	1900	1900	1591	1810	1524
c, Capacity [veh/h]	658	1467	1299	1088	246	207
d1, Uniform Delay [s]	4.24	3.81	7.56	5.32	41.87	42.15
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.86	1.36	0.16	2.31	3.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.41	0.50	0.09	0.80	0.85
d, Delay for Lane Group [s/veh]	4.54	4.66	8.92	5.48	44.18	45.77
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.26	3.00	5.80	0.61	4.77	4.34
50th-Percentile Queue Length [ft]	6.41	74.97	144.95	15.26	119.36	108.42
95th-Percentile Queue Length [veh]	0.46	5.40	9.75	1.10	8.36	7.75
95th-Percentile Queue Length [ft]	11.54	134.94	243.67	27.47	208.95	193.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.54	4.66	8.92	5.48	44.18	45.77
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.65		8.47		44.93	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	14.64					
Intersection LOS	B					
Intersection V/C	0.465					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.635

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	690	70	140	800	250	110	370	150	190	260	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	690	70	140	800	250	110	370	150	190	260	130
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	183	19	37	211	66	29	98	40	50	68	34
Total Analysis Volume [veh/h]	95	730	74	148	844	264	116	390	158	199	273	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	44	44	12	48	48	27	27	27	19	19	19
g / C, Green / Cycle	0.07	0.37	0.37	0.10	0.40	0.40	0.22	0.22	0.22	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.20	0.05	0.08	0.23	0.17	0.06	0.21	0.10	0.11	0.14	0.09
s, saturation flow rate [veh/h]	1810	3618	1529	1810	3618	1552	1810	1900	1546	1810	1900	1548
c, Capacity [veh/h]	120	1324	559	176	1435	616	401	421	343	292	307	250
d1, Uniform Delay [s]	55.21	30.24	25.37	53.26	28.49	26.32	38.85	45.74	40.49	47.41	49.28	46.26
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.25	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.66	0.49	4.06	1.77	2.18	0.15	17.33	0.36	1.04	5.65	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.79	0.55	0.13	0.84	0.59	0.43	0.29	0.93	0.46	0.68	0.89	0.54
d, Delay for Lane Group [s/veh]	59.51	31.90	25.86	57.32	30.26	28.50	38.99	63.08	40.85	48.46	54.93	46.95
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.54	1.48	4.80	10.56	6.27	2.85	13.24	4.05	5.64	8.40	3.75
50th-Percentile Queue Length [ft]	73.84	213.56	36.92	120.06	264.10	156.84	71.18	330.94	101.35	141.03	210.11	93.82
95th-Percentile Queue Length [veh]	5.32	13.34	2.66	8.40	15.89	10.38	5.13	19.20	7.30	9.54	13.16	6.75
95th-Percentile Queue Length [ft]	132.92	333.39	66.46	209.91	397.36	259.53	128.13	480.11	182.42	238.41	328.98	168.87

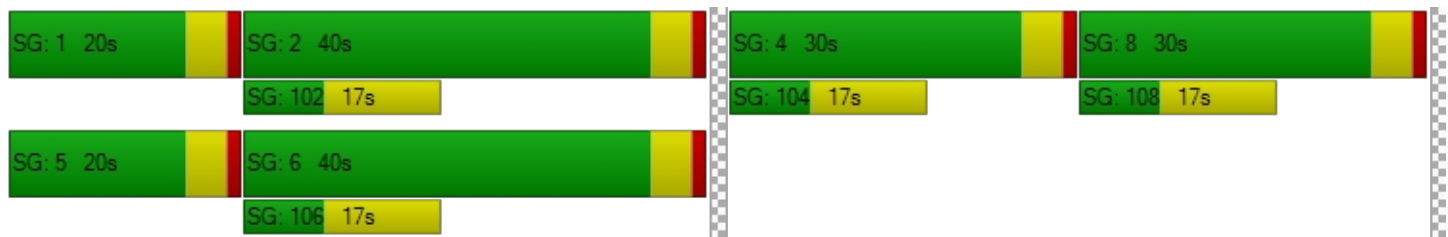


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	31.90	25.86	57.32	30.26	28.50	38.99	63.08	40.85	48.46	54.93	46.95
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	34.32			33.08			53.58			51.03		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	40.56											
Intersection LOS	D											
Intersection V/C	0.635											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.589

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	90	470	60	40	430	90	70	470	70	60	350	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	470	60	40	430	90	70	470	70	60	350	70
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	133	17	11	119	25	19	126	19	17	98	20
Total Analysis Volume [veh/h]	102	531	68	44	475	99	75	505	75	67	393	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	22	22	22	22	22	22
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.12	0.32	0.05	0.31	0.07	0.27	0.05	0.07	0.21	0.05
s, saturation flow rate [veh/h]	852	1855	832	1836	1005	1900	1571	908	1900	1561
c, Capacity [veh/h]	296	878	282	869	293	709	587	218	709	583
d1, Uniform Delay [s]	21.47	12.30	20.54	12.11	22.21	16.05	12.38	25.77	14.86	12.41
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.17	4.27	1.17	3.93	0.17	0.50	0.04	0.29	0.25	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

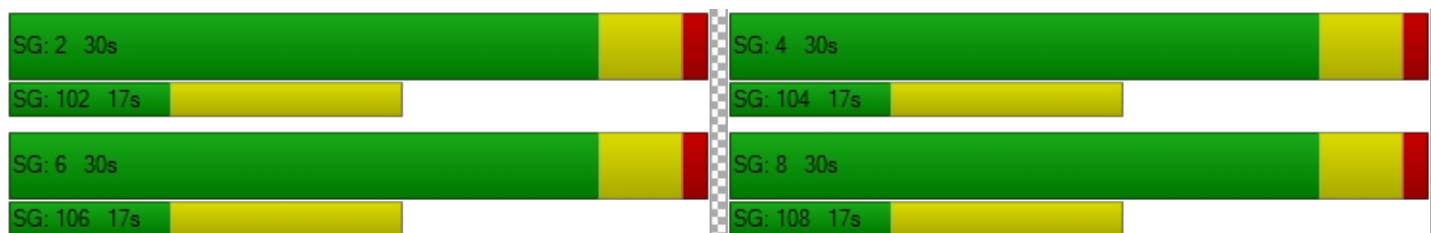
X, volume / capacity	0.34	0.68	0.16	0.66	0.26	0.71	0.13	0.31	0.55	0.14
d, Delay for Lane Group [s/veh]	24.63	16.57	21.71	16.04	22.38	16.55	12.41	26.07	15.11	12.45
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.49	6.47	0.58	5.88	0.88	5.14	0.58	0.87	3.68	0.62
50th-Percentile Queue Length [ft]	37.16	161.66	14.55	146.99	21.98	128.45	14.57	21.69	92.00	15.40
95th-Percentile Queue Length [veh]	2.68	10.64	1.05	9.86	1.58	8.86	1.05	1.56	6.62	1.11
95th-Percentile Queue Length [ft]	66.88	265.91	26.19	246.41	39.56	221.38	26.23	39.04	165.60	27.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.63	16.57	16.57	21.71	16.04	16.04	22.38	16.55	12.41	26.07	15.11	12.45
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.74			16.44			16.75			16.08		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.81											
Intersection LOS	B											
Intersection V/C	0.589											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	70	1070	80	70	1070	130	90	440	120	120	380	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1070	80	70	1070	130	90	440	120	120	380	80
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	289	22	19	296	36	23	114	31	32	102	22
Total Analysis Volume [veh/h]	76	1158	87	78	1186	144	93	457	125	129	409	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	57	57	68	57	57	43	31	31	43	32	32
g / C, Green / Cycle	0.56	0.47	0.47	0.56	0.47	0.47	0.36	0.26	0.26	0.36	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.13	0.33	0.34	0.12	0.36	0.37	0.08	0.24	0.08	0.11	0.22	0.06
s, saturation flow rate [veh/h]	606	1900	1833	637	1900	1779	1169	1900	1508	1158	1900	1508
c, Capacity [veh/h]	301	895	864	326	896	839	309	486	385	282	503	399
d1, Uniform Delay [s]	19.08	25.07	25.25	17.30	25.98	26.50	28.67	43.75	36.23	30.36	41.32	34.39
k, delay calibration	0.50	0.50	0.50	0.35	0.50	0.50	0.08	0.18	0.04	0.04	0.10	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	4.60	4.98	1.21	5.84	7.12	0.39	13.73	0.18	0.43	3.04	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	0.70	0.71	0.24	0.75	0.78	0.30	0.94	0.32	0.46	0.81	0.22
d, Delay for Lane Group [s/veh]	21.10	29.67	30.23	18.51	31.82	33.63	29.06	57.48	36.41	30.78	44.36	34.49
Lane Group LOS	C	C	C	B	C	C	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.07	14.79	14.64	1.04	16.63	16.68	1.82	14.90	2.98	2.57	11.57	1.96
50th-Percentile Queue Length [ft]	26.85	369.68	366.09	25.99	415.84	416.98	45.54	372.53	74.38	64.17	289.21	49.02
95th-Percentile Queue Length [veh]	1.93	21.09	20.92	1.87	23.32	23.38	3.28	21.23	5.36	4.62	17.15	3.53
95th-Percentile Queue Length [ft]	48.32	527.34	522.98	46.79	583.05	584.42	81.97	530.80	133.88	115.51	428.66	88.24



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.10	29.92	30.23	18.51	32.60	33.63	29.06	57.48	36.41	30.78	44.36	34.49
Movement LOS	C	C	C	B	C	C	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	29.44			31.92			49.66			40.20		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.36											
Intersection LOS	D											
Intersection V/C	0.682											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	20	150	70	20	130	30	50	600	30	70	500	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	150	70	20	130	30	50	600	30	70	500	30
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	42	20	6	42	10	13	151	8	20	140	8
Total Analysis Volume [veh/h]	22	168	78	26	166	38	50	606	30	78	559	34
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	89	89	89	89
g / C, Green / Cycle	0.18	0.18	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.16	0.16	0.06	0.34	0.10	0.32
s, saturation flow rate [veh/h]	1634	1482	836	1880	804	1876
c, Capacity [veh/h]	329	302	567	1395	538	1392
d1, Uniform Delay [s]	47.68	46.53	9.87	6.04	10.94	5.84
k, delay calibration	0.12	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.50	3.95	0.31	1.08	0.57	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

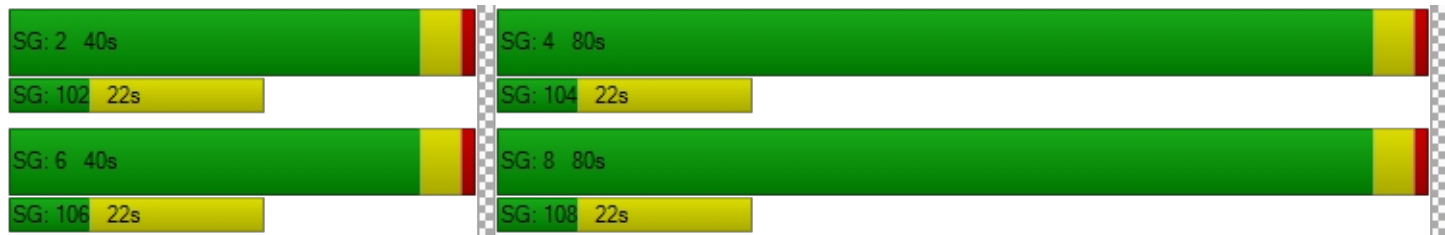
X, volume / capacity	0.81	0.76	0.09	0.46	0.15	0.43
d, Delay for Lane Group [s/veh]	53.17	50.47	10.18	7.12	11.51	6.80
Lane Group LOS	D	D	B	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	8.23	6.84	0.58	5.71	0.99	5.15
50th-Percentile Queue Length [ft]	205.80	170.99	14.52	142.79	24.64	128.64
95th-Percentile Queue Length [veh]	12.94	11.13	1.05	9.63	1.77	8.87
95th-Percentile Queue Length [ft]	323.44	278.21	26.13	240.77	44.35	221.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	53.17	53.17	53.17	50.47	50.47	50.47	10.18	7.12	7.12	11.51	6.80	6.80
Movement LOS	D	D	D	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	53.17			50.47			7.34			7.35		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	19.31											
Intersection LOS	B											
Intersection V/C	0.502											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	810	50	50	820	90	80	500	50	160	430	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	810	50	50	820	90	80	500	50	160	430	40
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	224	14	13	216	24	21	131	13	44	120	11
Total Analysis Volume [veh/h]	66	896	55	53	865	95	84	525	52	178	478	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	62	53	53	62	53	53	49	35	35	49	39	39
g / C, Green / Cycle	0.51	0.44	0.44	0.51	0.44	0.44	0.41	0.29	0.29	0.41	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.09	0.25	0.25	0.07	0.26	0.26	0.08	0.28	0.03	0.16	0.25	0.03
s, saturation flow rate [veh/h]	735	1900	1850	733	1900	1811	1070	1900	1527	1122	1900	1500
c, Capacity [veh/h]	348	836	814	350	831	793	316	551	443	307	623	492
d1, Uniform Delay [s]	17.46	25.15	25.20	17.10	25.52	25.64	25.37	41.77	31.29	28.46	36.19	27.90
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.07	0.33	0.04	0.04	0.19	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	2.86	2.98	0.07	3.03	3.28	0.30	21.63	0.04	0.65	3.59	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.57	0.58	0.15	0.59	0.59	0.27	0.95	0.12	0.58	0.77	0.09
d, Delay for Lane Group [s/veh]	18.67	28.01	28.18	17.18	28.55	28.91	25.67	63.40	31.34	29.11	39.78	27.93
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.03	10.80	10.62	0.73	11.12	10.83	1.48	18.21	1.11	3.32	12.93	0.88
50th-Percentile Queue Length [ft]	25.73	269.97	265.61	18.37	277.92	270.65	37.12	455.28	27.78	83.10	323.22	21.94
95th-Percentile Queue Length [veh]	1.85	16.19	15.97	1.32	16.58	16.22	2.67	25.21	2.00	5.98	18.83	1.58
95th-Percentile Queue Length [ft]	46.32	404.70	399.25	33.06	414.62	405.56	66.81	630.25	50.00	149.58	470.64	39.48

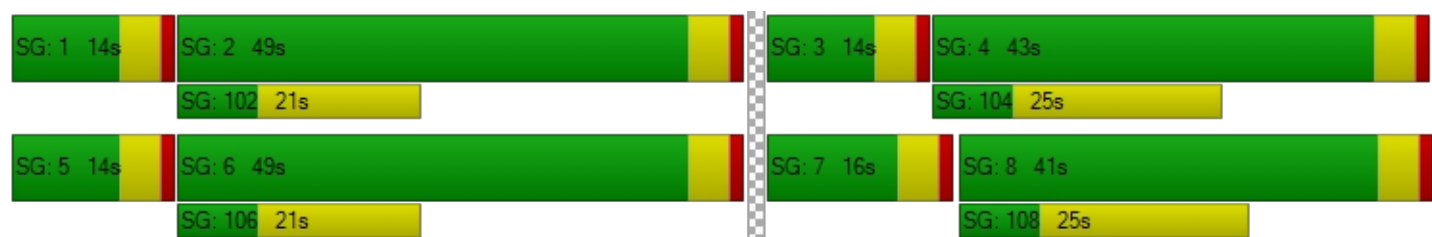


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.67	28.09	28.18	17.18	28.71	28.91	25.67	63.40	31.34	29.11	39.78	27.93
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	27.49			28.12			56.09			36.32		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	35.08											
Intersection LOS	D											
Intersection V/C	0.625											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	80	480	140	20	230	30	50	520	90	30	460	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	480	140	20	230	30	50	520	90	30	460	50
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	133	39	5	63	8	13	137	24	9	134	15
Total Analysis Volume [veh/h]	89	532	155	22	250	33	53	549	95	35	537	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	28	28	28	28	28	28
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.40	0.40	0.40	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.09	0.31	0.11	0.03	0.15	0.02	0.07	0.32	0.07	0.04	0.31	0.04
s, saturation flow rate [veh/h]	1027	1710	1377	796	1710	1414	788	1710	1321	782	1710	1289
c, Capacity [veh/h]	457	802	646	257	802	663	184	683	528	176	683	515
d1, Uniform Delay [s]	16.46	14.33	11.12	23.40	11.56	10.11	30.19	18.58	13.59	30.07	18.39	13.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.12	0.04	0.04	0.11	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.95	4.30	0.88	0.65	1.01	0.14	0.32	2.60	0.06	0.20	2.12	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

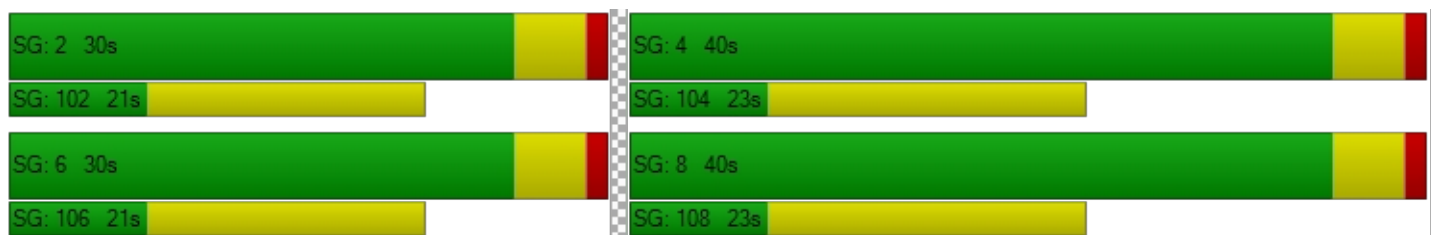
X, volume / capacity	0.19	0.66	0.24	0.09	0.31	0.05	0.29	0.80	0.18	0.20	0.79	0.11
d, Delay for Lane Group [s/veh]	17.41	18.63	12.00	24.05	12.57	10.25	30.51	21.18	13.65	30.27	20.52	13.25
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.06	6.53	1.42	0.33	2.34	0.27	0.83	7.42	0.89	0.54	7.11	0.53
50th-Percentile Queue Length [ft]	26.48	163.21	35.43	8.27	58.44	6.75	20.77	185.49	22.14	13.54	177.72	13.13
95th-Percentile Queue Length [veh]	1.91	10.72	2.55	0.60	4.21	0.49	1.50	11.89	1.59	0.97	11.48	0.95
95th-Percentile Queue Length [ft]	47.66	267.97	63.78	14.89	105.20	12.14	37.38	297.16	39.85	24.36	287.04	23.64

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.41	18.63	12.00	24.05	12.57	10.25	30.51	21.18	13.65	30.27	20.52	13.25
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	17.17			13.15			20.86			20.39		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.57											
Intersection LOS	B											
Intersection V/C	0.632											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.618

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	100	470	60	60	460	130	160	390	100	190	490	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	470	60	60	460	130	160	390	100	190	490	50
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	17	16	122	35	44	106	27	55	141	14
Total Analysis Volume [veh/h]	110	519	66	64	489	138	174	425	109	219	564	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	7	43	43	32	32	32	10	23	23	10	23	23
g / C, Green / Cycle	0.08	0.48	0.48	0.35	0.35	0.35	0.12	0.25	0.25	0.12	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.06	0.27	0.04	0.07	0.17	0.18	0.10	0.22	0.07	0.12	0.17	0.17
s, saturation flow rate [veh/h]	1810	1900	1543	891	1900	1700	1810	1900	1466	1810	1900	1803
c, Capacity [veh/h]	141	913	742	195	668	598	209	476	367	209	477	453
d1, Uniform Delay [s]	40.81	16.74	12.71	36.81	22.85	23.05	39.01	32.60	27.34	39.85	30.33	30.45
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.14	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	2.56	0.24	4.44	2.52	3.04	3.29	7.74	0.17	46.55	0.59	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.78	0.57	0.09	0.33	0.49	0.51	0.83	0.89	0.30	1.05	0.66	0.68
d, Delay for Lane Group [s/veh]	44.35	19.30	12.95	41.24	25.37	26.09	42.31	40.34	27.50	86.40	30.92	31.12
Lane Group LOS	D	B	B	D	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.50	7.87	0.75	1.54	5.68	5.40	3.90	9.71	1.89	7.21	6.01	5.84
50th-Percentile Queue Length [ft]	62.60	196.67	18.64	38.56	142.07	135.07	97.44	242.85	47.15	180.34	150.14	146.12
95th-Percentile Queue Length [veh]	4.51	12.47	1.34	2.78	9.59	9.22	7.02	14.83	3.39	11.83	10.02	9.81
95th-Percentile Queue Length [ft]	112.69	311.66	33.55	69.41	239.82	230.38	175.39	370.63	84.87	295.65	250.61	245.24

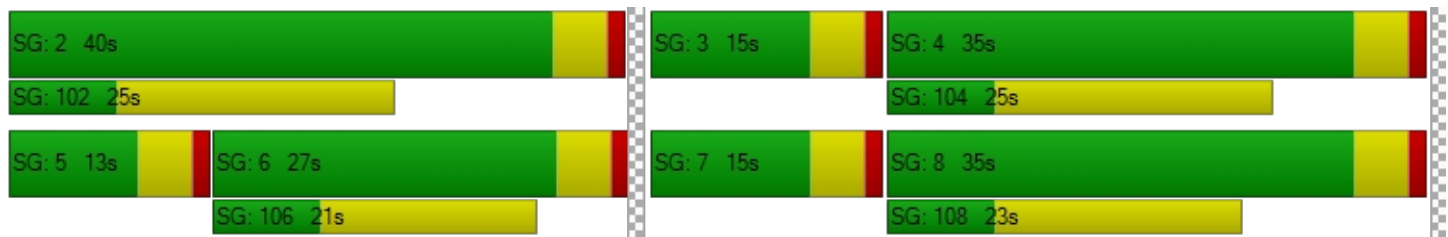


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.35	19.30	12.95	41.24	25.61	26.09	42.31	40.34	27.50	86.40	31.01	31.12
Movement LOS	D	B	B	D	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	22.66			27.16			38.85			45.44		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.15											
Intersection LOS	C											
Intersection V/C	0.618											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.719

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	350	70	330	0	470	0	950	240	120	890	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	350	70	330	0	470	0	950	240	120	890	0
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	1.0000	0.9224	0.9224	0.8935	0.8935	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	115	23	90	0	128	0	257	65	34	249	0
Total Analysis Volume [veh/h]	13	459	92	360	0	512	0	1030	260	134	996	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			173			0		
Bicycle Volume [bicycles/h]	32			6			28			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	30	0	30	0	48	0	48	0	12	60	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	20	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	30	30	14	54	50	50	7	62
g / C, Green / Cycle	0.02	0.25	0.25	0.12	0.45	0.42	0.42	0.06	0.52
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.17	0.10	0.18	0.34	0.37	0.07	0.28
s, saturation flow rate [veh/h]	1810	1900	1602	3514	2816	1900	1722	1810	3618
c, Capacity [veh/h]	38	467	394	424	1255	795	720	112	1876
d1, Uniform Delay [s]	57.94	40.10	41.03	51.68	22.53	30.74	32.46	56.29	19.19
k, delay calibration	0.04	0.04	0.06	0.04	0.04	0.50	0.50	0.16	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.98	0.47	1.11	1.85	0.08	8.83	15.98	112.49	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.60	0.68	0.85	0.41	0.81	0.90	1.20	0.53
d, Delay for Lane Group [s/veh]	59.92	40.57	42.14	53.54	22.61	39.57	48.44	168.78	20.27
Lane Group LOS	E	D	D	D	C	D	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.41	7.44	7.31	5.41	4.89	17.40	19.51	7.05	10.25
50th-Percentile Queue Length [ft]	10.26	185.93	182.76	135.24	122.29	434.97	487.86	176.28	256.28
95th-Percentile Queue Length [veh]	0.74	11.91	11.74	9.22	8.52	24.24	26.76	12.02	15.50
95th-Percentile Queue Length [ft]	18.47	297.74	293.62	230.60	212.97	605.99	668.98	300.57	387.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.92	41.17	42.14	53.54	0.00	22.61	0.00	42.88	48.44	168.78	20.27	0.00
Movement LOS	E	D	D	D		C		D	D	F	C	
d_A, Approach Delay [s/veh]	41.76			35.38			44.00			37.88		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	39.93											
Intersection LOS	D											
Intersection V/C	0.719											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1070	60	70	1250	30	40	100	40	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1070	60	70	1250	30	40	100	40	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	287	16	18	322	8	12	30	12	11	29	7
Total Analysis Volume [veh/h]	32	1148	64	72	1290	31	48	119	48	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	55	55	55	55	55	55	16	16
g / C, Green / Cycle	0.69	0.69	0.69	0.69	0.69	0.69	0.20	0.20
(v / s)_j Volume / Saturation Flow Rate	0.08	0.32	0.32	0.15	0.35	0.35	0.13	0.12
s, saturation flow rate [veh/h]	422	1900	1859	468	1900	1877	1627	1599
c, Capacity [veh/h]	296	1304	1276	328	1304	1288	378	373
d1, Uniform Delay [s]	11.27	5.80	5.81	11.37	6.04	6.06	29.36	28.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	1.21	1.25	1.53	1.42	1.45	0.50	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.47	0.47	0.22	0.51	0.51	0.57	0.50
d, Delay for Lane Group [s/veh]	12.00	7.01	7.06	12.91	7.46	7.51	29.86	29.10
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	3.94	3.89	0.80	4.46	4.45	3.67	3.12
50th-Percentile Queue Length [ft]	8.65	98.40	97.19	20.11	111.57	111.34	91.83	77.89
95th-Percentile Queue Length [veh]	0.62	7.08	7.00	1.45	7.93	7.91	6.61	5.61
95th-Percentile Queue Length [ft]	15.57	177.11	174.94	36.20	198.19	197.86	165.29	140.20



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.00	7.03	7.06	12.91	7.48	7.51	29.86	29.86	29.86	29.10	29.10	29.10
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.16			7.76			29.86			29.10		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.39											
Intersection LOS	B											
Intersection V/C	0.483											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	920	40	20	940	30	40	130	60	20	150	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	920	40	20	940	30	40	130	60	20	150	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	243	11	5	244	8	12	39	18	6	41	3
Total Analysis Volume [veh/h]	42	970	42	21	976	31	49	158	73	22	165	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.07	0.27	0.27	0.04	0.27	0.27	0.17	0.11
s, saturation flow rate [veh/h]	567	1900	1864	565	1900	1872	1676	1777
c, Capacity [veh/h]	376	1253	1229	374	1253	1234	431	450
d1, Uniform Delay [s]	10.58	6.33	6.34	10.22	6.31	6.32	28.58	26.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	0.98	1.01	0.29	0.97	0.99	0.62	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

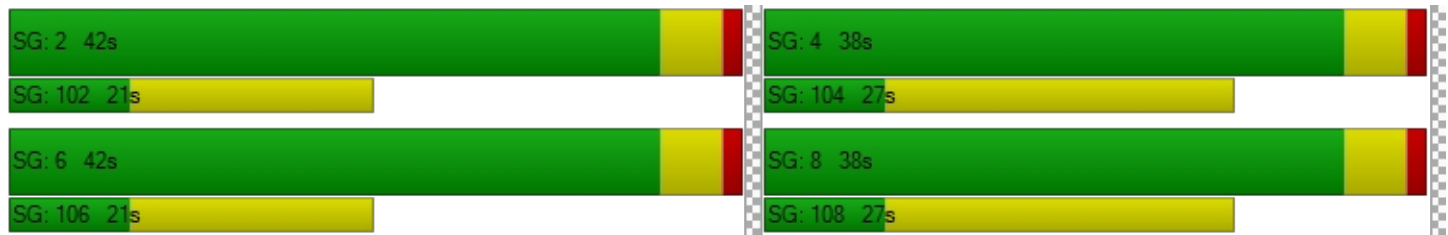
X, volume / capacity	0.11	0.41	0.41	0.06	0.40	0.41	0.65	0.44
d, Delay for Lane Group [s/veh]	11.18	7.31	7.34	10.51	7.28	7.31	29.20	27.05
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.43	3.61	3.57	0.21	3.57	3.55	4.78	3.15
50th-Percentile Queue Length [ft]	10.78	90.21	89.24	5.19	89.36	88.67	119.59	78.69
95th-Percentile Queue Length [veh]	0.78	6.50	6.43	0.37	6.43	6.38	8.37	5.67
95th-Percentile Queue Length [ft]	19.41	162.39	160.63	9.34	160.85	159.61	209.26	141.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.18	7.32	7.34	10.51	7.30	7.31	29.20	29.20	29.20	27.05	27.05	27.05
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.48			7.36			29.20			27.05		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.32											
Intersection LOS	B											
Intersection V/C	0.437											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	40	1160	60	30	1250	60	40	80	30	160	60	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1160	60	30	1250	60	40	80	30	160	60	40
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	342	18	8	319	15	11	22	8	46	17	11
Total Analysis Volume [veh/h]	47	1370	71	31	1274	61	43	87	32	184	69	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	22	22	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.28	0.28	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.11	0.38	0.39	0.08	0.35	0.36	0.16	0.02	0.19	0.03
s, saturation flow rate [veh/h]	416	1900	1859	376	1900	1861	790	1529	1300	1566
c, Capacity [veh/h]	244	1150	1125	218	1150	1126	281	428	441	438
d1, Uniform Delay [s]	17.94	10.08	10.14	18.93	9.65	9.68	23.82	21.19	25.75	21.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	2.63	2.75	1.36	2.18	2.26	0.44	0.03	0.44	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.63	0.64	0.14	0.58	0.59	0.46	0.07	0.57	0.11
d, Delay for Lane Group [s/veh]	19.70	12.71	12.89	20.29	11.82	11.94	24.26	21.21	26.19	21.41
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.70	7.47	7.45	0.47	6.58	6.53	1.83	0.42	4.11	0.62
50th-Percentile Queue Length [ft]	17.41	186.76	186.16	11.80	164.39	163.28	45.86	10.62	102.63	15.40
95th-Percentile Queue Length [veh]	1.25	11.95	11.92	0.85	10.78	10.72	3.30	0.76	7.39	1.11
95th-Percentile Queue Length [ft]	31.34	298.82	298.04	21.24	269.52	268.06	82.55	19.12	184.74	27.72

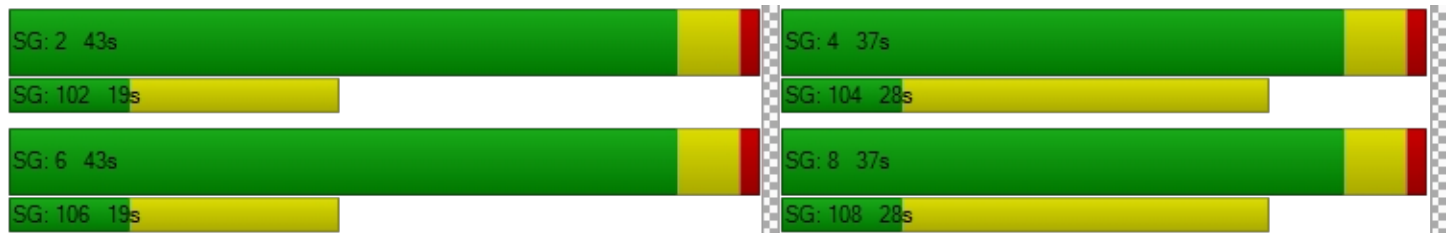


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.70	12.80	12.89	20.29	11.88	11.94	24.26	24.26	21.21	26.19	26.19	21.41
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.02			12.07			23.66			25.46		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.27											
Intersection LOS	B											
Intersection V/C	0.580											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1220	110	70	1240	240	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1220	110	70	1240	240	100
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	362	33	19	345	66	28
Total Analysis Volume [veh/h]	1450	131	78	1380	265	110
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.42	0.44	0.24	0.39	0.15	0.07
s, saturation flow rate [veh/h]	1863	1792	322	3547	1728	1560
c, Capacity [veh/h]	1337	1286	230	2546	311	281
d1, Uniform Delay [s]	6.22	6.40	16.98	5.86	35.69	32.50
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	2.20	3.97	0.83	6.58	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

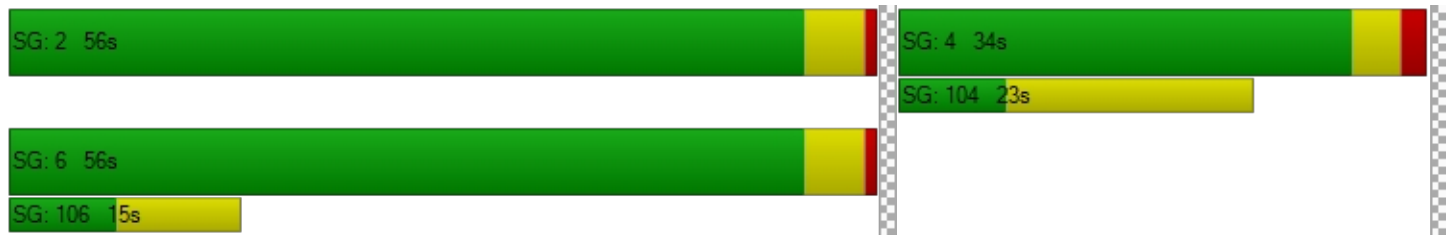
X, volume / capacity	0.59	0.61	0.34	0.54	0.85	0.39
d, Delay for Lane Group [s/veh]	8.14	8.61	20.94	6.69	42.27	33.40
Lane Group LOS	A	A	C	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.13	6.36	1.33	5.01	6.00	2.12
50th-Percentile Queue Length [ft]	153.29	159.11	33.30	125.13	150.12	53.12
95th-Percentile Queue Length [veh]	10.19	10.50	2.40	8.67	10.02	3.82
95th-Percentile Queue Length [ft]	254.82	262.54	59.94	216.85	250.58	95.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.35	8.61	20.94	6.69	42.27	33.40
Movement LOS	A	A	C	A	D	C
d_A, Approach Delay [s/veh]	8.37		7.45		39.67	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.42					
Intersection LOS	B					
Intersection V/C	0.594					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	930	60	40	940	60	70	380	90	100	280	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	930	60	40	940	60	70	380	90	100	280	50
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	259	17	10	238	15	18	99	23	30	83	15
Total Analysis Volume [veh/h]	22	1036	67	41	954	61	73	395	94	118	331	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.04	0.29	0.30	0.08	0.27	0.27	0.37	0.43
s, saturation flow rate [veh/h]	564	1900	1846	519	1900	1844	1518	1194
c, Capacity [veh/h]	221	806	783	200	806	783	709	578
d1, Uniform Delay [s]	21.00	14.05	14.09	23.32	13.60	13.64	15.05	16.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.35	0.44
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	4.83	5.09	2.31	3.81	4.02	6.31	15.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.69	0.70	0.21	0.64	0.64	0.79	0.88
d, Delay for Lane Group [s/veh]	21.89	18.87	19.19	25.63	17.41	17.66	21.35	32.11
Lane Group LOS	C	B	B	C	B	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.30	6.37	6.31	0.63	5.57	5.50	6.75	8.22
50th-Percentile Queue Length [ft]	7.55	159.35	157.71	15.70	139.21	137.61	168.76	205.52
95th-Percentile Queue Length [veh]	0.54	10.51	10.43	1.13	9.44	9.35	11.01	12.92
95th-Percentile Queue Length [ft]	13.59	262.86	260.69	28.25	235.96	233.80	275.28	323.07

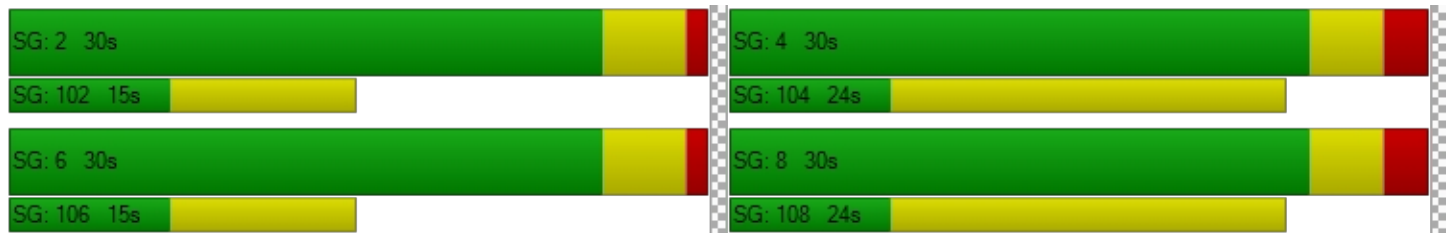


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.89	19.02	19.19	25.63	17.52	17.66	21.35	21.35	21.35	32.11	32.11	32.11
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.09			17.85			21.35			32.11		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.11											
Intersection LOS	C											
Intersection V/C	0.721											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	340	110	30	140	30	70	480	60	30	370	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	340	110	30	140	30	70	480	60	30	370	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	87	28	10	45	10	18	127	16	8	100	5
Total Analysis Volume [veh/h]	31	347	112	39	182	39	74	506	63	32	400	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	21	30	30
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.10	0.03	0.37	0.25
s, saturation flow rate [veh/h]	1212	1752	929	1863	1524	1749	1814
c, Capacity [veh/h]	406	607	186	645	528	942	972
d1, Uniform Delay [s]	18.00	17.38	27.04	14.21	13.16	11.50	9.88
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.95	0.55	0.24	0.06	4.00	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

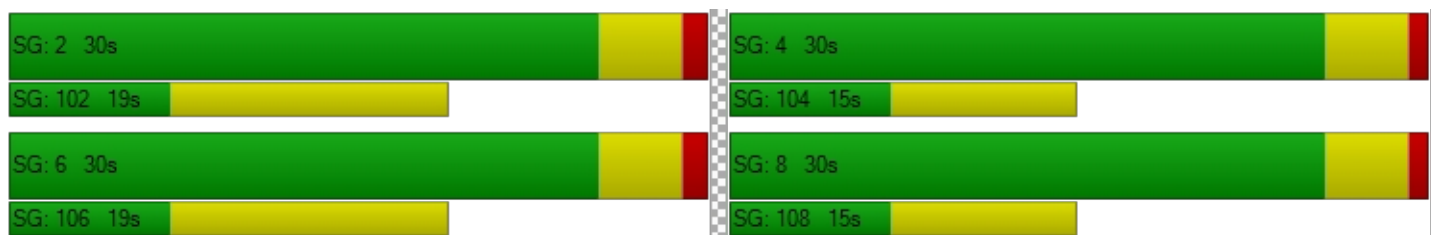
X, volume / capacity	0.08	0.76	0.21	0.28	0.07	0.68	0.47
d, Delay for Lane Group [s/veh]	18.08	19.33	27.60	14.45	13.22	15.50	11.49
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	5.18	0.54	1.66	0.33	6.16	3.55
50th-Percentile Queue Length [ft]	7.89	129.47	13.56	41.53	8.24	153.94	88.83
95th-Percentile Queue Length [veh]	0.57	8.91	0.98	2.99	0.59	10.23	6.40
95th-Percentile Queue Length [ft]	14.21	222.77	24.40	74.75	14.84	255.68	159.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.08	19.33	19.33	27.60	14.45	13.22	15.50	15.50	15.50	11.49	11.49	11.49
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.25			16.24			15.50			11.49		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.61											
Intersection LOS	B											
Intersection V/C	0.630											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	480	0	140	0	0	0	0	1370	610	50	1340	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	480	0	140	0	0	0	0	1370	610	50	1340	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	0	42	0	0	0	0	387	172	14	363	0
Total Analysis Volume [veh/h]	580	0	169	0	0	0	0	1549	690	54	1451	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	0	74	74	110	74	74	74
g / C, Green / Cycle	0.26	0.26	0.00	0.62	0.62	0.92	0.62	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.21	0.22	0.00	0.00	0.30	0.43	0.16	0.26	0.26
s, saturation flow rate [veh/h]	1810	1680	1863	365	5176	1615	339	3618	1900
c, Capacity [veh/h]	472	438	7	229	3208	1479	208	2242	1178
d1, Uniform Delay [s]	41.58	41.75	0.00	0.00	12.35	0.74	22.73	11.74	11.74
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.48	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.52	4.08	0.00	0.00	0.52	1.02	3.02	0.59	1.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.83	0.00	0.00	0.48	0.47	0.26	0.42	0.42
d, Delay for Lane Group [s/veh]	45.09	45.83	0.00	0.00	12.88	1.76	25.75	12.34	12.87
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	11.10	10.57	0.00	0.00	7.19	0.42	1.18	6.35	6.84
50th-Percentile Queue Length [ft]	277.54	264.15	0.00	0.00	179.86	10.47	29.56	158.73	171.07
95th-Percentile Queue Length [veh]	16.57	15.90	0.00	0.00	11.59	0.75	2.13	10.48	11.13
95th-Percentile Queue Length [ft]	414.14	397.43	0.00	0.00	289.83	18.85	53.21	262.03	278.32

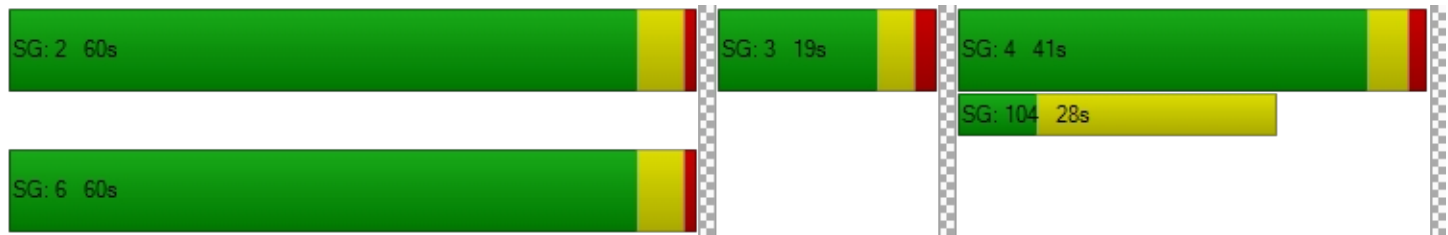


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.34	45.83	45.83	0.00	0.00	0.00	0.00	12.88	1.76	25.75	12.52	12.87
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.45			0.00			9.45			12.99		
Approach LOS	D			A			A			B		
d_I, Intersection Delay [s/veh]	16.64											
Intersection LOS	B											
Intersection V/C	0.516											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	270	130	20	170	30	40	160	0	10	110	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	270	130	20	170	30	40	160	0	10	110	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	78	37	6	53	9	12	49	0	3	35	6
Total Analysis Volume [veh/h]	23	310	149	25	214	38	49	196	0	13	138	25
Pedestrian Volume [ped/h]	10			5			6			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	625	575	539	531
Degree of Utilization, x	0.77	0.48	0.45	0.33

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	7.21	2.60	2.35	1.44
95th-Percentile Queue Length [ft]	180.27	65.06	58.73	36.00
Approach Delay [s/veh]	25.48	14.92	15.12	13.10
Approach LOS	D	B	C	B
Intersection Delay [s/veh]	19.01			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST) / MONTANA AVENUE \ (102)**

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	20	570	630	30	60	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	570	630	30	60	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	158	164	8	19	6
Total Analysis Volume [veh/h]	22	634	658	31	74	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	12	12	12	4
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.14
(v / s)_j Volume / Saturation Flow Rate	0.03	0.33	0.35	0.02	0.06
s, saturation flow rate [veh/h]	785	1900	1900	1588	1756
c, Capacity [veh/h]	395	900	900	752	260
d1, Uniform Delay [s]	9.55	5.06	5.16	3.44	9.35
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.38	0.44	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

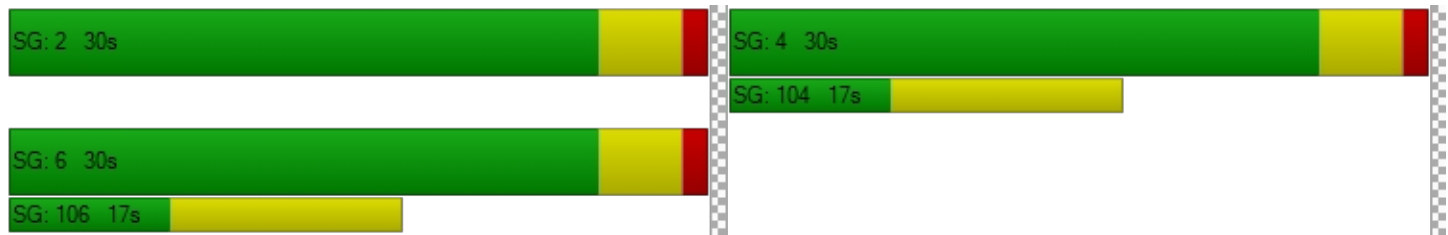
X, volume / capacity	0.06	0.70	0.73	0.04	0.38
d, Delay for Lane Group [s/veh]	9.57	5.44	5.59	3.45	9.69
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.07	0.71	0.76	0.02	0.35
50th-Percentile Queue Length [ft]	1.75	17.77	18.99	0.55	8.76
95th-Percentile Queue Length [veh]	0.13	1.28	1.37	0.04	0.63
95th-Percentile Queue Length [ft]	3.15	31.98	34.19	1.00	15.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.57	5.44	5.59	3.45	9.69	9.69
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.58		5.50		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.82					
Intersection LOS	A					
Intersection V/C	0.403					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	342	3	3	375	181	210	3	34
Total Analysis Volume [veh/h]	0	0	0	61	1369	10	10	1500	723	841	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		52	52	52	52	52	85	28	28
g / C, Green / Cycle		0.58	0.58	0.58	0.58	0.58	0.95	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate		0.17	0.36	0.36	0.03	0.41	0.45	0.24	0.09
s, saturation flow rate [veh/h]		355	1900	1895	391	3618	1615	3514	1600
c, Capacity [veh/h]		172	1109	1106	203	2111	1525	1103	502
d1, Uniform Delay [s]		29.85	12.22	12.22	21.62	13.29	0.25	27.75	23.20
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.66	2.64	2.65	0.46	2.06	1.06	1.12	0.31
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.36	0.62	0.62	0.05	0.71	0.47	0.76	0.29
d, Delay for Lane Group [s/veh]		35.52	14.85	14.87	22.08	15.35	1.31	28.87	23.51
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	10.41	10.40	0.17	9.94	0.45	7.91	2.26
50th-Percentile Queue Length [ft]		38.02	260.34	259.98	4.24	248.59	11.22	197.79	56.48
95th-Percentile Queue Length [veh]		2.74	15.71	15.69	0.30	15.11	0.81	12.52	4.07
95th-Percentile Queue Length [ft]		68.43	392.65	392.20	7.62	377.87	20.19	313.11	101.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.52	14.86	14.87	22.08	15.35	1.31	28.87	23.51	23.51
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			15.73			10.83			28.09		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.654											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	45.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.763

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	300	280	420	0	230	630	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	300	280	420	0	230	630	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	79	73	109	0	60	165	0	21
Total Analysis Volume [veh/h]	0	0	0	0	314	293	438	0	240	660	0	84
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.17	0.18	0.24	0.13	0.35	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		35.41	15.67	35.31	4.51	21.39	14.73
k, delay calibration		0.16	0.29	0.47	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		11.39	0.91	82.17	0.29	7.22	0.33
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.90	0.39	1.12	0.18	0.78	0.12
d, Delay for Lane Group [s/veh]		46.79	16.58	117.48	4.80	28.61	15.06
Lane Group LOS		D	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		7.84	4.10	17.22	1.35	12.85	1.04
50th-Percentile Queue Length [ft]		196.12	102.50	430.46	33.69	321.26	26.11
95th-Percentile Queue Length [veh]		12.44	7.38	25.55	2.43	18.73	1.88
95th-Percentile Queue Length [ft]		310.95	184.49	638.84	60.65	468.23	47.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	46.79	16.58	117.48	0.00	4.80	28.61	0.00	15.06
Movement LOS					D	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			32.21			77.59			27.08		
Approach LOS	A			C			E			C		
d_I, Intersection Delay [s/veh]	45.49											
Intersection LOS	D											
Intersection V/C	0.763											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	150	190	160	140	60	10	50	1040	100	0	820	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	190	160	140	60	10	50	1040	100	0	820	80
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	53	44	39	17	3	14	288	28	0	238	23
Total Analysis Volume [veh/h]	166	210	177	156	67	11	55	1151	111	0	951	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	53	53	53	53	53
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.14	0.13	0.13	0.15	0.05	0.11	0.26	0.27	0.31	0.32
s, saturation flow rate [veh/h]	1154	1676	1344	1029	1624	483	3192	1576	1676	1610
c, Capacity [veh/h]	369	520	417	271	504	260	1875	926	985	946
d1, Uniform Delay [s]	29.54	24.47	24.65	35.16	22.48	19.98	10.40	10.46	11.12	11.33
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	0.50	0.69	1.92	0.14	1.84	0.78	1.62	2.04	2.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.45	0.40	0.42	0.58	0.15	0.21	0.45	0.46	0.53	0.55
d, Delay for Lane Group [s/veh]	30.40	24.97	25.34	37.08	22.62	21.83	11.17	12.07	13.16	13.65
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	3.16	3.52	3.01	3.36	1.20	0.93	4.44	4.69	6.19	6.35
50th-Percentile Queue Length [ft]	79.08	88.01	75.17	83.94	29.91	23.19	110.93	117.35	154.72	158.66
95th-Percentile Queue Length [veh]	5.69	6.34	5.41	6.04	2.15	1.67	7.89	8.25	10.27	10.48
95th-Percentile Queue Length [ft]	142.34	158.41	135.30	151.09	53.84	41.74	197.29	206.18	256.72	261.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.40	24.97	25.34	37.08	22.62	22.62	21.83	11.42	12.07	0.00	13.38	13.65
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	26.72			32.26			11.91			13.41		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.52											
Intersection LOS	B											
Intersection V/C	0.476											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	0	550	110	150	900	110	160	840	90	70	750	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	550	110	150	900	110	160	840	90	70	750	70
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	145	29	45	271	33	46	243	26	20	212	20
Total Analysis Volume [veh/h]	0	581	116	180	1083	132	185	973	104	79	847	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	43	33	33	43	39	39	38	29	29	38	25	25
g / C, Green / Cycle	0.48	0.37	0.37	0.48	0.44	0.44	0.42	0.32	0.32	0.42	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.00	0.16	0.07	0.11	0.31	0.08	0.20	0.29	0.29	0.11	0.25	0.25
s, saturation flow rate [veh/h]	581	3547	1558	1643	3547	1563	920	1900	1799	735	1900	1807
c, Capacity [veh/h]	265	1310	575	791	1542	680	357	615	582	277	535	509
d1, Uniform Delay [s]	0.00	21.43	19.36	13.63	20.72	15.72	20.96	28.94	29.23	20.60	30.90	31.11
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.35	0.11	0.25	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	1.09	0.79	0.67	2.70	0.64	5.28	12.43	15.65	0.56	10.31	12.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.00	0.44	0.20	0.23	0.70	0.19	0.52	0.89	0.91	0.29	0.88	0.90
d, Delay for Lane Group [s/veh]	0.00	22.52	20.15	14.30	23.41	16.36	26.23	41.38	44.88	21.16	41.21	43.74
Lane Group LOS	A	C	C	B	C	B	C	D	D	C	D	D
Critical Lane Group	No	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.00	4.67	1.74	2.19	9.33	1.74	2.92	12.72	12.91	1.02	10.96	10.99
50th-Percentile Queue Length [ft]	0.00	116.82	43.51	54.69	233.23	43.47	72.97	318.11	322.70	25.51	273.92	274.79
95th-Percentile Queue Length [veh]	0.00	8.22	3.13	3.94	14.34	3.13	5.25	18.57	18.80	1.84	16.39	16.43
95th-Percentile Queue Length [ft]	0.00	205.45	78.31	98.44	358.46	78.25	131.34	464.37	470.00	45.92	409.64	410.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	22.52	20.15	14.30	23.41	16.36	26.23	42.91	44.88	21.16	42.34	43.74
Movement LOS	A	C	C	B	C	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	22.13			21.57			40.63			40.78		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.61											
Intersection LOS	C											
Intersection V/C	0.631											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	180	930	70	0	880	80	130	970	120	60	760	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	930	70	0	880	80	130	970	120	60	760	50
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	263	20	0	245	22	35	262	32	19	246	16
Total Analysis Volume [veh/h]	204	1053	79	0	981	89	141	1049	130	78	983	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	40	40	40	40	40
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.38	0.31	0.31	0.20	0.20	0.26	0.29	0.09	0.15	0.28	0.28
s, saturation flow rate [veh/h]	531	1863	1807	3547	1744	545	3618	1498	535	1900	1838
c, Capacity [veh/h]	234	837	812	1594	784	196	1623	672	188	852	824
d1, Uniform Delay [s]	35.17	19.71	19.79	17.09	17.17	37.16	19.29	15.00	33.55	18.99	19.08
k, delay calibration	0.35	0.23	0.23	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.54	2.06	2.23	0.20	0.41	20.33	2.00	0.64	6.61	3.40	3.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.87	0.68	0.69	0.45	0.46	0.72	0.65	0.19	0.41	0.62	0.63
d, Delay for Lane Group [s/veh]	60.70	21.77	22.02	17.29	17.58	57.49	21.30	15.64	40.16	22.39	22.70
Lane Group LOS	E	C	C	B	B	E	C	B	D	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	6.17	9.47	9.34	4.91	4.97	4.23	8.51	1.67	1.88	8.64	8.54
50th-Percentile Queue Length [ft]	154.35	236.78	233.59	122.68	124.36	105.65	212.66	41.80	47.07	216.12	213.47
95th-Percentile Queue Length [veh]	10.25	14.52	14.36	8.54	8.63	7.60	13.29	3.01	3.39	13.47	13.33
95th-Percentile Queue Length [ft]	256.22	362.96	358.91	213.51	215.80	189.94	332.24	75.24	84.73	336.67	333.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.70	21.88	22.02	0.00	17.37	17.58	57.49	21.30	15.64	40.16	22.53	22.70
Movement LOS	E	C	C		B	B	E	C	B	D	C	C
d_A, Approach Delay [s/veh]	27.82			17.39			24.61			23.76		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	23.70											
Intersection LOS	C											
Intersection V/C	0.674											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	49.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.789

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	210	770	510	360	950	340	50	920	140	130	730	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	210	770	510	360	950	340	50	920	140	130	730	60
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	60	219	145	97	255	91	13	242	37	38	214	18
Total Analysis Volume [veh/h]	239	875	579	387	1021	365	53	966	147	153	856	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	40	57	12	40	57	12	36	54	12	37	37
g / C, Green / Cycle	0.10	0.33	0.47	0.10	0.33	0.47	0.10	0.30	0.45	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.37	0.11	0.20	0.24	0.03	0.27	0.10	0.09	0.24	0.05
s, saturation flow rate [veh/h]	1810	5074	1564	3445	5074	1505	1810	3618	1450	1774	3618	1496
c, Capacity [veh/h]	188	1689	751	358	1689	722	188	1068	658	184	1110	459
d1, Uniform Delay [s]	54.05	32.44	25.91	54.05	33.60	21.55	49.90	40.86	20.02	53.01	37.95	30.40
k, delay calibration	0.43	0.50	0.50	0.11	0.50	0.50	0.11	0.20	0.26	0.18	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	152.94	1.14	7.54	47.88	1.61	2.52	0.81	5.67	0.41	14.45	2.47	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.27	0.52	0.77	1.08	0.60	0.51	0.28	0.90	0.22	0.83	0.77	0.15
d, Delay for Lane Group [s/veh]	206.99	33.57	33.45	101.93	35.22	24.07	50.71	46.53	20.43	67.46	40.42	30.72
Lane Group LOS	F	C	C	F	D	C	D	D	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	13.61	6.94	14.70	7.78	8.52	7.49	1.51	14.31	2.55	5.23	11.62	1.51
50th-Percentile Queue Length [ft]	340.27	173.46	367.39	194.56	213.04	187.35	37.70	357.77	63.82	130.87	290.56	37.85
95th-Percentile Queue Length [veh]	21.49	11.26	20.98	12.73	13.31	11.98	2.71	20.52	4.59	8.99	17.21	2.73
95th-Percentile Queue Length [ft]	537.18	281.46	524.56	318.33	332.72	299.59	67.87	512.88	114.87	224.68	430.34	68.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	206.99	33.57	33.45	101.93	35.22	24.07	50.71	46.53	20.43	67.46	40.42	30.72
Movement LOS	F	C	C	F	D	C	D	D	C	E	D	C
d_A, Approach Delay [s/veh]	58.01			47.48			43.43			43.62		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	49.05											
Intersection LOS	D											
Intersection V/C	0.789											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	680	400	620	1100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	680	400	620	1100
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	189	111	164	292
Total Analysis Volume [veh/h]	0	0	757	445	657	1166
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.41	0.37
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	11.51	12.79	29.72	0.19
k, delay calibration	0.50	0.50	0.27	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	2.87	104.74	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.42	0.56	1.21	0.39
d, Delay for Lane Group [s/veh]	12.25	15.66	134.46	0.57
Lane Group LOS	B	B	F	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.22	5.91	26.78	0.16
50th-Percentile Queue Length [ft]	105.53	147.69	669.60	3.91
95th-Percentile Queue Length [veh]	7.59	9.89	39.65	0.28
95th-Percentile Queue Length [ft]	189.76	247.34	991.23	7.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	12.25	15.66	134.46	0.57
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		13.51		48.82	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	34.79					
Intersection LOS	C					
Intersection V/C	0.725					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	70	1110	70	150	960	80	90	380	240	130	500	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1110	70	150	960	80	90	380	240	130	500	50
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	327	21	41	264	22	24	100	63	35	136	14
Total Analysis Volume [veh/h]	82	1308	82	165	1056	88	95	400	253	142	545	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	37	0	15	52	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	50	50	50	31	31	31	31	31	31
g / C, Green / Cycle	0.40	0.40	0.40	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.17	0.41	0.06	0.24	0.33	0.07	0.13	0.13	0.19	0.16	0.18	0.19
s, saturation flow rate [veh/h]	478	3192	1407	680	3192	1349	718	3192	1331	862	1676	1583
c, Capacity [veh/h]	153	1266	558	344	1778	751	201	1088	454	275	572	540
d1, Uniform Delay [s]	38.84	27.19	17.43	18.11	13.22	9.46	35.83	22.38	24.16	32.30	23.91	24.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.70	34.36	0.56	4.72	1.47	0.32	1.71	0.21	1.07	1.50	0.77	0.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.53	1.03	0.15	0.48	0.59	0.12	0.47	0.37	0.56	0.52	0.53	0.55
d, Delay for Lane Group [s/veh]	51.54	61.55	17.98	22.83	14.69	9.78	37.54	22.58	25.24	33.80	24.68	24.92
Lane Group LOS	D	F	B	C	B	A	D	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.35	18.84	1.15	2.00	6.83	0.84	2.06	3.14	4.39	2.92	5.17	5.06
50th-Percentile Queue Length [ft]	58.78	471.04	28.73	50.01	170.76	20.95	51.39	78.56	109.64	72.90	129.37	126.58
95th-Percentile Queue Length [veh]	4.23	26.57	2.07	3.60	11.12	1.51	3.70	5.66	7.82	5.25	8.91	8.75
95th-Percentile Queue Length [ft]	105.80	664.24	51.72	90.02	277.92	37.71	92.51	141.42	195.50	131.22	222.64	218.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.54	61.55	17.98	22.83	14.69	9.78	37.54	22.58	25.24	33.80	24.78	24.92
Movement LOS	D	F	B	C	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	58.57			15.38			25.38			26.52		
Approach LOS	E			B			C			C		
d_I, Intersection Delay [s/veh]	33.95											
Intersection LOS	C											
Intersection V/C	0.661											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	140	1000	60	80	990	100	60	460	140	40	500	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	1000	60	80	990	100	60	460	140	40	500	40
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	277	17	21	254	26	18	141	43	11	141	11
Total Analysis Volume [veh/h]	155	1106	66	82	1016	103	74	565	172	45	562	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.34	0.24	0.24	0.19	0.23	0.23	0.10	0.34	0.12	0.06	0.37
s, saturation flow rate [veh/h]	451	3192	1624	429	3192	1591	729	1676	1406	758	1653
c, Capacity [veh/h]	214	1583	805	203	1583	789	109	705	591	142	695
d1, Uniform Delay [s]	37.76	18.47	18.49	31.40	18.24	18.27	53.09	27.86	21.04	47.23	29.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.28	0.04	0.04	0.34
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.31	1.09	2.14	5.88	1.01	2.04	2.77	5.47	0.10	0.47	10.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

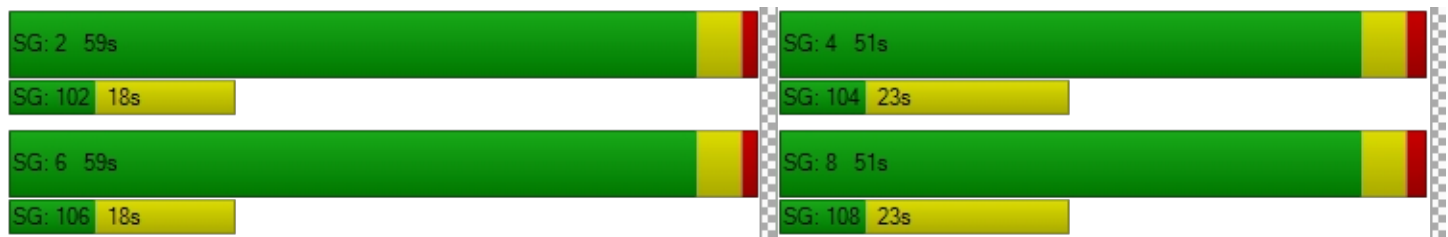
X, volume / capacity	0.73	0.49	0.49	0.40	0.47	0.47	0.68	0.80	0.29	0.32	0.87
d, Delay for Lane Group [s/veh]	57.08	19.56	20.63	37.28	19.25	20.31	55.86	33.33	21.14	47.69	39.59
Lane Group LOS	E	B	C	D	B	C	E	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.32	6.67	7.05	2.15	6.32	6.57	2.13	13.69	2.92	1.19	16.21
50th-Percentile Queue Length [ft]	132.91	166.69	176.16	53.66	157.93	164.32	53.28	342.15	72.93	29.83	405.19
95th-Percentile Queue Length [veh]	9.10	10.90	11.40	3.86	10.44	10.78	3.84	19.75	5.25	2.15	22.81
95th-Percentile Queue Length [ft]	227.44	272.57	284.99	96.58	260.98	269.43	95.91	493.83	131.27	53.70	570.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.08	19.88	20.63	37.28	19.53	20.31	55.86	33.33	21.14	47.69	39.59	39.59
Movement LOS	E	B	C	D	B	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	24.26			20.81			32.80			40.15		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	27.55											
Intersection LOS	C											
Intersection V/C	0.711											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	145.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.845

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	100	890	830	140	410	30	330	880	150	50	1390	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	890	830	140	410	30	330	880	150	50	1390	180
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	228	213	39	114	8	89	238	41	13	366	47
Total Analysis Volume [veh/h]	102	912	850	155	455	33	358	954	163	53	1462	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	59	46	57	59	48	48	54	46	46	54	42	51
g / C, Green / Cycle	0.49	0.38	0.47	0.49	0.40	0.40	0.45	0.38	0.38	0.45	0.35	0.43
(v / s)_j Volume / Saturation Flow Rate	0.10	0.33	0.68	0.20	0.13	0.13	0.63	0.33	0.34	0.08	0.51	0.12
s, saturation flow rate [veh/h]	1058	2800	1253	767	1863	1817	568	1500	1807	651	2856	1576
c, Capacity [veh/h]	529	1062	598	279	749	731	210	567	683	216	989	683
d1, Uniform Delay [s]	17.53	34.32	32.04	25.32	24.74	24.75	47.34	34.91	35.20	26.52	39.26	21.94
k, delay calibration	0.12	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	2.15	199.21	1.73	0.25	0.26	335.15	18.11	17.13	2.68	220.47	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.86	1.42	0.56	0.33	0.33	1.70	0.89	0.90	0.25	1.48	0.28
d, Delay for Lane Group [s/veh]	17.72	36.47	231.25	27.05	24.99	25.01	382.49	53.03	52.33	29.21	259.73	22.95
Lane Group LOS	B	D	F	C	C	C	F	D	D	C	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.55	12.22	49.50	2.63	4.90	4.80	23.36	15.96	19.44	1.01	44.42	3.58
50th-Percentile Queue Length [ft]	38.86	305.39	1237.47	65.86	122.50	120.04	584.03	399.11	486.02	25.21	1110.49	89.53
95th-Percentile Queue Length [veh]	2.80	17.95	75.90	4.74	8.53	8.40	40.42	22.52	26.67	1.82	68.38	6.45
95th-Percentile Queue Length [ft]	69.95	448.69	1897.50	118.55	213.25	209.88	1010.40	562.93	666.80	45.38	1709.40	161.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.72	36.47	231.25	27.05	25.00	25.01	382.49	52.70	52.33	29.21	259.73	22.95
Movement LOS	B	D	F	C	C	C	F	D	D	C	F	C
d_A, Approach Delay [s/veh]	124.27			25.50			132.70			226.30		
Approach LOS	F			C			F			F		
d_I, Intersection Delay [s/veh]	145.86											
Intersection LOS	F											
Intersection V/C	0.845											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	24.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	260	70	50	100	40	30	840	40	90	780	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	260	70	50	100	40	30	840	40	90	780	30
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	72	19	15	30	12	8	224	11	28	242	9
Total Analysis Volume [veh/h]	55	288	77	60	120	48	32	894	43	111	966	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	54	54	54	54
g / C, Green / Cycle	0.29	0.29	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.29	0.25	0.36	0.36	0.49	0.48
s, saturation flow rate [veh/h]	1435	929	1224	1499	792	1509
c, Capacity [veh/h]	465	323	783	906	531	912
d1, Uniform Delay [s]	31.48	27.56	10.55	10.88	17.15	13.56
k, delay calibration	0.35	0.25	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	17.70	6.30	2.83	2.81	8.35	7.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.90	0.71	0.56	0.59	0.72	0.80
d, Delay for Lane Group [s/veh]	49.19	33.86	13.38	13.69	25.50	20.84
Lane Group LOS	D	C	B	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	11.09	4.84	4.58	6.32	7.54	11.38
50th-Percentile Queue Length [ft]	277.16	120.96	114.49	157.92	188.46	284.62
95th-Percentile Queue Length [veh]	16.55	8.45	8.09	10.44	12.04	16.92
95th-Percentile Queue Length [ft]	413.67	211.15	202.23	260.96	301.03	422.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.19	49.19	49.19	33.86	33.86	33.86	13.38	13.55	13.69	25.50	22.16	20.84
Movement LOS	D	D	D	C	C	C	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	49.19			33.86			13.55			22.45		
Approach LOS	D			C			B			C		
d_I, Intersection Delay [s/veh]	24.36											
Intersection LOS	C											
Intersection V/C	0.778											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type: Two-way stop  
 Analysis Method: HCM 2010  
 Analysis Period: 15 minutes

Delay (sec / veh): 27.3  
 Level Of Service: D  
 Volume to Capacity (v/c): 0.148

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	540	510	0	20	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	540	510	0	20	40
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	155	147	0	7	14
Total Analysis Volume [veh/h]	0	621	587	0	28	56
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.15	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	27.29	13.54
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.51	0.40
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	12.70	9.90
d_A, Approach Delay [s/veh]	0.00		0.00		18.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.18					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	520	550	0	20	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	520	550	0	20	40
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	146	156	0	7	13
Total Analysis Volume [veh/h]	0	585	625	0	27	53
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.69	0.40	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	18.15	8.80	0.00	0.00	0.00
Movement LOS		C	A		A	A
95th-Percentile Queue Length [veh]	0.00	5.70	1.95	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	142.49	48.72	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.15		8.80		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	12.49					
Intersection LOS	C					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	40	420	10	10	250	10	0	0	0	20	10	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	420	10	10	250	10	0	0	0	20	10	30
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	133	3	3	71	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	51	533	13	11	283	11	0	0	0	27	13	40
Pedestrian Volume [ped/h]	35			23			5			6		



**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	799	751	587	633
Degree of Utilization, x	0.75	0.41	0.00	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	6.96	1.98	0.00	0.43
95th-Percentile Queue Length [ft]	174.06	49.47	0.00	10.78
Approach Delay [s/veh]	19.58	11.02	0.00	9.51
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	16.10			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	20	400	10	0	220	10	10	10	10	20	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	400	10	0	220	10	10	10	10	20	0	20
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	115	3	0	71	3	4	4	4	7	0	7
Total Analysis Volume [veh/h]	23	461	12	0	282	13	18	18	18	28	0	28
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	788	756	633	641
Degree of Utilization, x	0.63	0.39	0.09	0.09

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	4.53	1.86	0.28	0.29
95th-Percentile Queue Length [ft]	113.35	46.51	6.97	7.16
Approach Delay [s/veh]	15.00	10.78	9.22	9.16
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	12.91			
Intersection LOS	B			



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** San Vicente Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	80	1	80	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	170	1	170	370	1	370
	↘ Through-Right		0			0	
	↘ Right	120	1	45	150	1	80
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	260	1	260	190	1	190
	↵↔ Left-Through		0			0	
	→ Through	280	1	280	260	1	260
	↘ Through-Right		0			0	
	↘ Right	150	1	120	130	1	85
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	60	1	60	90	1	90
	↵↔ Left-Through		0			0	
	→ Through	870	2	435	690	2	345
	↘ Through-Right		0			0	
	↘ Right	80	1	40	70	1	15
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	150	1	150	140	1	140
	↵↔ Left-Through		0			0	
	→ Through	810	2	405	800	2	400
	↘ Through-Right		0			0	
	↘ Right	150	1	20	250	1	155
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 450			<i>North-South:</i> 630
				<i>East-West:</i> 585			<i>East-West:</i> 490
				<i>SUM:</i> 1035			<i>SUM:</i> 1120
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.753			0.815
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.653</b>			<b>0.715</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 0	<b>SB--</b> 0	0	<b>NB--</b> 0	<b>SB--</b> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 2	<b>WB--</b> 2	2	<b>EB--</b> 2	<b>WB--</b> 2	2
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	40	0	40
	Left-Through		1			1	
	Through	90	0	160	80	0	120
	Through-Right		0			0	
	Right	10	1	0	30	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	170	0	170	160	0	160
	Left-Through		1			1	
	Through	60	0	230	60	0	220
	Through-Right		0			0	
	Right	20	1	5	40	1	20
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	30	1	30	40	1	40
	Left-Through		0			0	
	Through	980	1	505	1160	1	610
	Through-Right		1			1	
	Right	30	0	30	60	0	60
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	1250	1	700	1250	1	655
	Through-Right		1			1	
	Right	150	0	150	60	0	60
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 330			<i>North-South:</i> 280
				<i>East-West:</i> 730			<i>East-West:</i> 695
				<b>SUM:</b> 1060			<b>SUM:</b> 975
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.707			0.650
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.607</b>			<b>0.550</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	180	1	180	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	70	1	70	100	1	100
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1190	1	655	1220	1	665
	↵↔ Through-Right		1			1	
	↵ Right	120	0	120	110	0	110
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	60	1	60	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1400	2	700	1240	2	620
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 180			<i>North-South:</i> 240
				<i>East-West:</i> 715			<i>East-West:</i> 735
				<i>SUM:</i> 895			<i>SUM:</i> 975
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.597			0.650
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.497</b>			<b>0.550</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	110	0	110	70	0	70
	↵↔ Left-Through		0			0	
	→ Through	290	0	450	380	0	540
	↘ Through-Right		0			0	
	↘ Right	50	0	0	90	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	0	30	100	0	100
	↵↔ Left-Through		0			0	
	→ Through	200	0	270	280	0	430
	↘ Through-Right		0			0	
	↘ Right	40	0	0	50	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	20	1	20
	↵↔ Left-Through		0			0	
	→ Through	760	1	420	930	1	495
	↘ Through-Right		1			1	
	↘ Right	80	0	80	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	1340	1	720	940	1	500
	↘ Through-Right		1			1	
	↘ Right	100	0	100	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 480			<i>North-South:</i> 640
				<i>East-West:</i> 740			<i>East-West:</i> 535
				<i>SUM:</i> 1220			<i>SUM:</i> 1175
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.813			0.783
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.713</b>			<b>0.683</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Broadway

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	70	0	70
	Left-Through		0			0	
	Through	410	0	530	480	0	610
	Through-Right		0			0	
	Right	50	0	0	60	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	10	0	10	30	0	30
	Left-Through		0			0	
	Through	350	0	380	370	0	420
	Through-Right		0			0	
	Right	20	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	170	0	290	340	0	450
	Through-Right		1			1	
	Right	120	0	0	110	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	30	1	30	30	1	30
	Left-Through		0			0	
	Through	210	1	210	140	1	140
	Through-Right		0			0	
	Right	20	1	20	30	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		540	<i>North-South:</i>		640
		<i>East-West:</i>		320	<i>East-West:</i>		480
		<i>SUM:</i>		860	<i>SUM:</i>		1120
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.573			0.747
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.473</b>			<b>0.647</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	0	0	0	0	0	0
	↶↷ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↷ Through-Right		0			0	
	→ Right	0	0	0	0	0	0
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	520	2	286	690	2	380
	↷↶ Left-Through		0			0	
	→ Through	10	0	60	10	0	120
	↷ Through-Right		1			1	
	→ Right	50	0	0	110	0	0
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	40	1	40	60	1	60
	↶↶ Left-Through		0			0	
	→ Through	1000	1	505	1340	1	675
	↷ Through-Right		1			1	
	→ Right	10	0	10	10	0	10
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	10	1	10	10	1	10
	↶↶ Left-Through		0			0	
	→ Through	1570	2	785	1370	2	685
	↷ Through-Right		0			0	
	→ Right	700	1	414	660	1	280
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 286			<i>North-South:</i> 380
				<i>East-West:</i> 825			<i>East-West:</i> 745
				<i>SUM:</i> 1111			<i>SUM:</i> 1125
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.741			0.750
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.641</b>			<b>0.650</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	760	1	470	480	1	310
	↵↔ Left-Through		0		0	0	
	→ Through	0	0	470	0	0	310
	↘ Through-Right		0		0	0	
	↘ Right	180	0	0	140	0	0
	↘↔ Left-Through-Right		1		1	1	
	↘↔ Left-Right		0		0	0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0		0	0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0		0	0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		1		1	1	
	↘↔ Left-Right		0		0	0	
<b>EASTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↔ Left-Through		0		0	0	
	→ Through	970	3	323	1370	3	457
	↘ Through-Right		0		0	0	
	↘ Right	320	1	0	610	1	300
	↘↔ Left-Through-Right		0		0	0	
	↘↔ Left-Right		0		0	0	
<b>WESTBOUND</b>	↵ Left	140	1	140	50	1	50
	↵↔ Left-Through		0		0	0	
	→ Through	1450	2	483	1340	2	447
	↘ Through-Right		1		1	1	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0		0	0	
	↘↔ Left-Right		0		0	0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 470			<i>North-South:</i> 310
				<i>East-West:</i> 483			<i>East-West:</i> 507
				<i>SUM:</i> 953			<i>SUM:</i> 817
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.669			0.573
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.569</b>			<b>0.473</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 2	<b>SB--</b> 2	2	<b>NB--</b> 2	<b>SB--</b> 2	2
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 0	0	<b>EB--</b> 3	<b>WB--</b> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	420	1	420	420	1	420
	Left-Through		0			0	
	Through	510	1	510	230	1	230
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	340	1	340	630	1	630
	Through-Right		0			0	
	Right	80	1	80	80	1	80
	Left-Through-Right		0			0	
<b>EASTBOUND</b>	Left	620	1	620	300	1	300
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	330	1	0	280	1	0
	Left-Through-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 760			<i>North-South:</i> 1050
				<i>East-West:</i> 620			<i>East-West:</i> 300
				<b>SUM:</b> 1380			<b>SUM:</b> 1350
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.968			0.947
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.868</b>			<b>0.847</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Texas Ave  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	70	0	70	30	0	30
	↶↷ Left-Through		1			1	
	→ Through	840	0	570	840	0	500
	↷ Through-Right		1			1	
	→ Right	20	0	570	40	0	500
	↷↶ Left-Through-Right		0			0	
	↷ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	20	0	20	90	0	90
	↷↶ Left-Through		1			1	
	→ Through	750	0	425	780	0	585
	↶ Through-Right		1			1	
	→ Right	20	0	425	30	0	585
	↶↷ Left-Through-Right		0			0	
	↶ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	30	0	30	50	0	50
	↶↷ Left-Through		0			0	
	→ Through	80	0	190	260	0	380
	↷ Through-Right		0			0	
	→ Right	80	0	0	70	0	0
	↷↶ Left-Through-Right		1			1	
	↷ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	50	0	50	50	0	50
	↶↷ Left-Through		0			0	
	→ Through	90	0	200	100	0	190
	↷ Through-Right		0			0	
	→ Right	60	0	0	40	0	0
	↷↶ Left-Through-Right		1			1	
	↷ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 590			<i>North-South:</i> 615
				<i>East-West:</i> 240			<i>East-West:</i> 430
				<i>SUM:</i> 830			<i>SUM:</i> 1045
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.553			0.697
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.453</b>			<b>0.597</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



# Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	160	1	160	160	1	160
	↵↔ Left-Through		0			0	
	→ Through	720	1	420	840	1	465
	↘ Through-Right		1			1	
	↘ Right	120	0	120	90	0	90
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	790	1	440	750	1	410
	↘ Through-Right		1			1	
	↘ Right	90	0	90	70	0	70
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	0	1	0
	↵↔ Left-Through		0			0	
	→ Through	890	2	445	550	2	275
	↘ Through-Right		0			0	
	↘ Right	80	1	0	110	1	30
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	120	1	120	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	980	2	490	900	2	450
	↘ Through-Right		0			0	
	↘ Right	90	1	35	110	1	75
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 600			<i>North-South:</i> 570
				<i>East-West:</i> 565			<i>East-West:</i> 450
				<i>SUM:</i> 1165			<i>SUM:</i> 1020
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.847			0.742
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.747</b>			<b>0.642</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	1	70	130	1	130
	↵↔ Left-Through		0			0	
	→ Through	890	2	445	970	2	485
	↵↔ Through-Right		0			0	
	↵ Right	70	1	70	120	1	120
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	60	1	60	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	740	1	420	760	1	405
	↵↔ Through-Right		1			1	
	↵ Right	100	0	100	50	0	50
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	50	1	50	180	1	180
	↵↔ Left-Through		0			0	
	→ Through	710	1	430	930	1	500
	↵↔ Through-Right		1			1	
	↵ Right	150	0	150	70	0	70
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	980	2	353	880	2	320
	↵↔ Through-Right		1			1	
	↵ Right	80	0	80	80	0	80
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 505			<i>North-South:</i> 545
				<i>East-West:</i> 430			<i>East-West:</i> 500
				<i>SUM:</i> 935			<i>SUM:</i> 1045
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.623			0.697
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.523</b>			<b>0.597</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	1	70	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	950	2	343	1040	2	380
	↘ Through-Right		1			1	
	↘ Right	80	0	80	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	860	1	490	820	1	450
	↘ Through-Right		1			1	
	↘ Right	120	0	120	80	0	80
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	90	1	90	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	130	0	230	190	0	350
	↘ Through-Right		1			1	
	↘ Right	100	0	0	160	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	140	1	140	140	1	140
	↵↔ Left-Through		0			0	
	→ Through	170	1	170	60	1	60
	↘ Through-Right		0			0	
	↘ Right	10	1	10	10	1	10
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		560	<i>North-South:</i>		500
		<i>East-West:</i>		370	<i>East-West:</i>		490
		<i>SUM:</i>		930	<i>SUM:</i>		990
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.620			0.660
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.520</b>			<b>0.560</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM				
		No. of Phases			4				
		Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0				
		NB--	3	SB--	1	NB--	3	SB--	1
		EB--	3	WB--	3	EB--	3	WB--	3
		ATSAC-1 or ATSAC+ATCS-2?			2				
		Override Capacity			0				
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume		
<b>NORTHBOUND</b>	↵ Left	160	1	160	50	1	50		
	↵↔ Left-Through		0			0			
	→ Through	940	2	470	920	2	460		
	↘ Through-Right		0			0			
	↘ Right	160	1	55	140	1	0		
	↘↔ Left-Through-Right		0			0			
	↘↔ Left-Right		0			0			
<b>SOUTHBOUND</b>	↵ Left	280	1	280	130	1	130		
	↵↔ Left-Through		0			0			
	→ Through	810	2	405	730	2	365		
	↘ Through-Right		0			0			
	↘ Right	120	1	0	60	1	0		
	↘↔ Left-Through-Right		0			0			
	↘↔ Left-Right		0			0			
<b>EASTBOUND</b>	↵ Left	110	1	110	210	1	210		
	↵↔ Left-Through		0			0			
	→ Through	750	3	250	770	3	257		
	↘ Through-Right		0			0			
	↘ Right	100	1	0	510	1	460		
	↘↔ Left-Through-Right		0			0			
	↘↔ Left-Right		0			0			
<b>WESTBOUND</b>	↵ Left	190	2	105	360	2	198		
	↵↔ Left-Through		0			0			
	→ Through	1180	3	393	950	3	317		
	↘ Through-Right		0			0			
	↘ Right	300	1	20	340	1	210		
	↘↔ Left-Through-Right		0			0			
	↘↔ Left-Right		0			0			
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		750	<i>North-South:</i>		590		
		<i>East-West:</i>		503	<i>East-West:</i>		658		
		<b>SUM:</b>		1253	<b>SUM:</b>		1248		
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.911			0.908		
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.811</b>			<b>0.808</b>		
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>		





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Ocean Park Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	660	1	660	330	1	330
	↵↔ Left-Through		0			0	
	→ Through	1510	1	840	880	1	515
	↘ Through-Right		1			1	
	↘ Right	170	0	170	150	0	150
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	1	30	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	680	2	340	1390	2	695
	↘ Through-Right		0			0	
	↘ Right	340	1	320	180	1	130
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	350	2	175	890	2	445
	↘ Through-Right		0			0	
	↘ Right	320	1	0	830	1	665
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	140	1	140
	↵↔ Left-Through		0			0	
	→ Through	620	1	340	410	1	220
	↘ Through-Right		1			1	
	↘ Right	60	0	60	30	0	30
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1000			<i>North-South:</i> 1025
				<i>East-West:</i> 380			<i>East-West:</i> 805
				<i>SUM:</i> 1380			<i>SUM:</i> 1830
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.004			1.331
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.904</b>			<b>1.231</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>E</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** I-10 EB On-Ramp  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1000	2	500	680	2	340
	↘ Through-Right		0			0	
	↘ Right	520	1	520	400	1	400
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	550	1	550	620	1	620
	↵↔ Left-Through		0			0	
	→ Through	1040	2	520	1100	2	550
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		1070	<i>North-South:</i>		1020
		<i>East-West:</i>		0	<i>East-West:</i>		0
		<b>SUM:</b>		1070	<b>SUM:</b>		1020
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.713			0.680
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.613</b>			<b>0.580</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>

## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	150	1	150	90	1	90
	↵↔ Left-Through		0			0	
	→ Through	370	2	185	380	2	190
	↵↔ Through-Right		0			0	
	↵ Right	100	1	0	240	1	165
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	210	1	210	130	1	130
	↵↔ Left-Through		0			0	
	→ Through	270	1	170	500	1	275
	↵↔ Through-Right		1			1	
	↵ Right	70	0	70	50	0	50
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1380	2	690	1110	2	555
	↵↔ Through-Right		0			0	
	↵ Right	30	1	0	70	1	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	250	1	250	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	1130	2	565	960	2	480
	↵↔ Through-Right		0			0	
	↵ Right	60	1	0	80	1	15
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 395			<i>North-South:</i> 365
				<i>East-West:</i> 940			<i>East-West:</i> 705
				<i>SUM:</i> 1335			<i>SUM:</i> 1070
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.937			0.751
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.837</b>			<b>0.651</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Approval Year  
**Count Date:** Late 2016 - Early 2017

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	60	1	60	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	550	1	550	460	1	460
	↘ Through-Right		0			0	
	↘ Right	90	1	30	140	1	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	500	0	560	500	0	540
	↘ Through-Right		1			1	
	↘ Right	60	0	0	40	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	140	1	140
	↵↔ Left-Through		0			0	
	→ Through	960	2	337	1000	2	353
	↘ Through-Right		1			1	
	↘ Right	50	0	50	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	120	1	120	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1170	2	403	990	2	363
	↘ Through-Right		1			1	
	↘ Right	40	0	40	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 660			<i>North-South:</i> 600
				<i>East-West:</i> 473			<i>East-West:</i> 503
				<i>SUM:</i> 1133			<i>SUM:</i> 1103
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.755			0.735
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.655</b>			<b>0.635</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**APPROVAL YEAR (2019) PLUS PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	34.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	112	301	40	111	50	166	360	50	20	430	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	112	301	40	111	50	166	360	50	20	430	130
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	30	82	11	30	13	47	101	14	5	117	35
Total Analysis Volume [veh/h]	43	122	327	43	119	54	186	404	56	22	467	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	29	51	51	3	24	24
g / C, Green / Cycle	0.30	0.63	0.30	0.30	0.33	0.56	0.56	0.03	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.42	0.21	0.42	0.04	0.10	0.21	0.04	0.01	0.25	0.12
s, saturation flow rate [veh/h]	392	1538	383	1528	1810	1900	1499	1643	1900	1204
c, Capacity [veh/h]	169	970	167	463	593	1068	842	54	508	322
d1, Uniform Delay [s]	27.52	7.80	27.56	22.66	22.68	10.97	8.97	42.66	32.03	27.36
k, delay calibration	0.50	0.12	0.50	0.04	0.50	0.50	0.50	0.04	0.19	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	63.08	0.23	62.85	0.04	1.38	1.02	0.15	1.82	11.75	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.98	0.34	0.97	0.12	0.31	0.38	0.07	0.41	0.92	0.44
d, Delay for Lane Group [s/veh]	90.60	8.03	90.41	22.70	24.07	11.99	9.13	44.48	43.78	27.71
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.63	2.79	5.44	0.81	3.12	4.45	0.51	0.50	11.21	2.50
50th-Percentile Queue Length [ft]	140.71	69.82	136.00	20.14	77.97	111.32	12.65	12.55	280.37	62.41
95th-Percentile Queue Length [veh]	9.52	5.03	9.27	1.45	5.61	7.91	0.91	0.90	16.71	4.49
95th-Percentile Queue Length [ft]	237.98	125.67	231.63	36.25	140.34	197.84	22.77	22.60	417.68	112.33

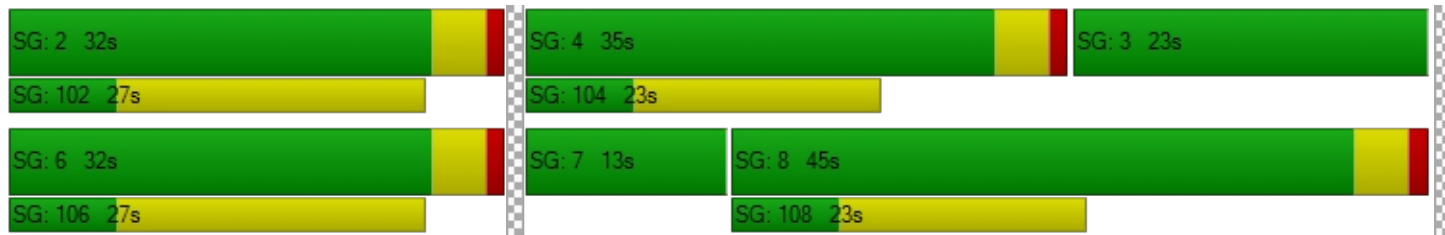


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	90.60	90.60	8.03	90.41	90.41	22.70	24.07	11.99	9.13	44.48	43.78	27.71
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	35.72			73.48			15.22			40.21		
Approach LOS	D			E			B			D		
d_I, Intersection Delay [s/veh]	34.58											
Intersection LOS	C											
Intersection V/C	0.812											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	661	120	200	636	20	150	310	220	70	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	661	120	200	636	20	150	310	220	70	360	40
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	174	32	51	162	5	40	83	59	19	97	11
Total Analysis Volume [veh/h]	21	696	126	204	649	20	160	332	235	75	388	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	45	45	45	36	36	36	24	24	24
g / C, Green / Cycle	0.36	0.36	0.36	0.50	0.50	0.50	0.40	0.40	0.40	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.03	0.19	0.08	0.20	0.18	0.01	0.13	0.17	0.15	0.07	0.11	0.12
s, saturation flow rate [veh/h]	778	3618	1488	1002	3618	1482	1201	1900	1544	1047	1900	1817
c, Capacity [veh/h]	262	1309	538	507	1805	740	500	758	616	198	508	486
d1, Uniform Delay [s]	27.15	22.71	20.04	14.10	13.78	11.46	18.42	19.72	19.19	38.21	27.30	27.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	1.55	1.02	2.36	0.56	0.07	0.70	0.15	0.14	0.45	0.21	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

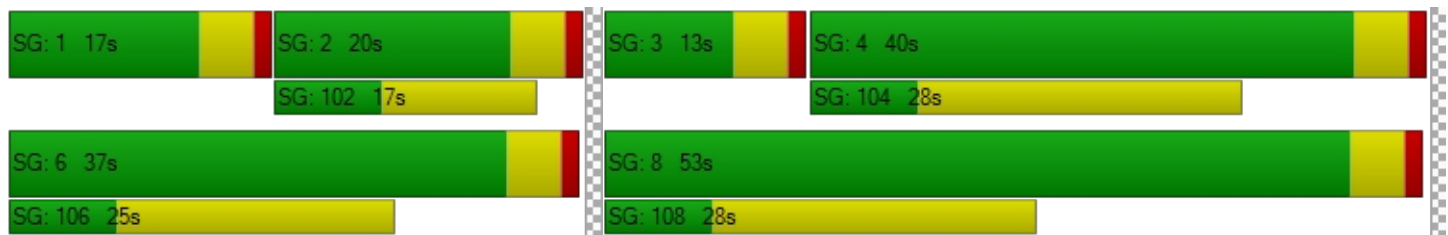
X, volume / capacity	0.08	0.53	0.23	0.40	0.36	0.03	0.32	0.44	0.38	0.38	0.43	0.44
d, Delay for Lane Group [s/veh]	27.75	24.26	21.06	16.46	14.34	11.53	19.12	19.87	19.34	38.66	27.52	27.60
Lane Group LOS	C	C	C	B	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.39	5.91	1.95	2.50	3.86	0.20	2.23	4.92	3.40	1.57	3.78	3.69
50th-Percentile Queue Length [ft]	9.86	147.84	48.79	62.41	96.52	5.12	55.80	123.10	84.90	39.16	94.58	92.31
95th-Percentile Queue Length [veh]	0.71	9.90	3.51	4.49	6.95	0.37	4.02	8.56	6.11	2.82	6.81	6.65
95th-Percentile Queue Length [ft]	17.75	247.55	87.82	112.34	173.73	9.21	100.44	214.08	152.81	70.48	170.24	166.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.75	24.26	21.06	16.46	14.34	11.53	19.12	19.87	19.34	38.66	27.55	27.60
Movement LOS	C	C	C	B	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	23.87			14.77			19.53			29.20		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	21.02											
Intersection LOS	C											
Intersection V/C	0.442											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.350

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	96	60	50	109	50	90	650	110	20	690	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	96	60	50	109	50	90	650	110	20	690	20
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	29	18	16	35	16	23	169	29	5	185	5
Total Analysis Volume [veh/h]	12	114	71	63	138	63	94	678	115	21	738	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	50	50	58	47	47
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.64	0.56	0.56	0.64	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.07	0.05	0.05	0.12	0.11	0.21	0.22	0.03	0.20	0.20
s, saturation flow rate [veh/h]	1845	1489	1225	1667	889	1900	1718	804	1900	1870
c, Capacity [veh/h]	517	382	308	428	594	1057	955	536	984	969
d1, Uniform Delay [s]	26.62	26.10	31.38	28.26	7.04	11.28	11.44	6.82	13.07	13.10
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.12	0.30	0.05	1.06	1.27	0.14	1.15	1.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.24	0.19	0.20	0.47	0.16	0.38	0.40	0.04	0.39	0.39
d, Delay for Lane Group [s/veh]	26.71	26.19	31.50	28.56	7.08	12.34	12.71	6.96	14.23	14.28
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.10	1.16	1.15	3.57	0.61	4.55	4.42	0.15	4.68	4.65
50th-Percentile Queue Length [ft]	52.51	29.06	28.85	89.27	15.28	113.67	110.51	3.74	116.93	116.18
95th-Percentile Queue Length [veh]	3.78	2.09	2.08	6.43	1.10	8.04	7.87	0.27	8.22	8.18
95th-Percentile Queue Length [ft]	94.51	52.31	51.93	160.69	27.51	201.10	196.72	6.74	205.60	204.57

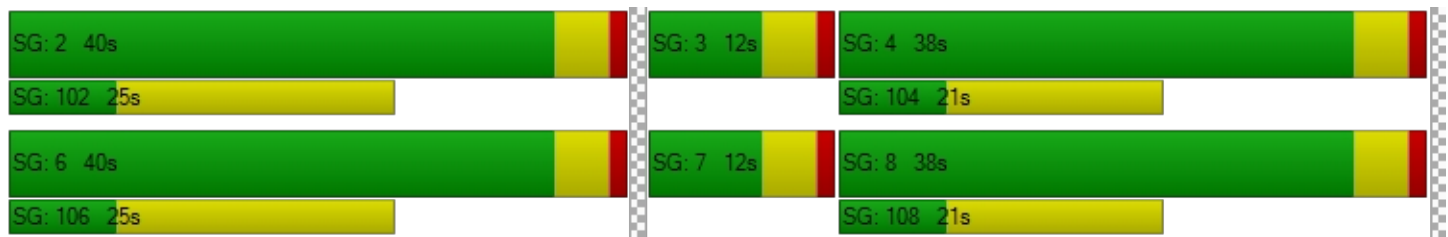


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.71	26.71	26.19	31.50	28.56	28.56	7.08	12.49	12.71	6.96	14.25	14.28
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.52			29.26			11.95			14.06		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.350											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	297	60	113	314	100	110	740	185	80	630	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	297	60	113	314	100	110	740	185	80	630	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	86	17	32	88	28	29	193	48	22	172	3
Total Analysis Volume [veh/h]	12	344	69	127	352	112	115	772	193	87	689	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.22	0.22	0.22	0.34	0.34	0.34	0.56	0.44	0.44	0.56	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.01	0.11	0.12	0.10	0.19	0.07	0.12	0.26	0.27	0.11	0.18	0.19
s, saturation flow rate [veh/h]	1014	1900	1717	1239	1900	1503	951	1900	1721	807	1900	1887
c, Capacity [veh/h]	124	408	369	439	648	513	551	829	751	443	822	816
d1, Uniform Delay [s]	41.72	31.26	31.51	21.62	24.03	21.15	10.34	19.44	19.64	11.72	17.79	17.80
k, delay calibration	0.04	0.04	0.04	0.06	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.38	0.48	0.21	0.26	0.08	0.26	3.23	3.83	0.99	1.62	1.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

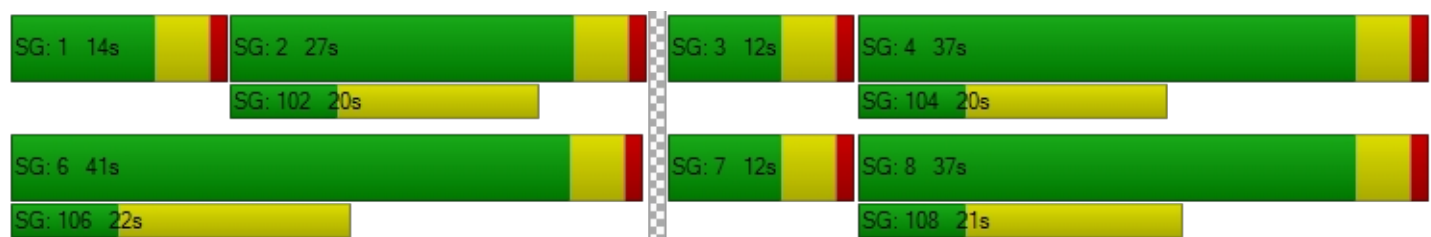
X, volume / capacity	0.10	0.52	0.55	0.29	0.54	0.22	0.21	0.60	0.62	0.20	0.43	0.43
d, Delay for Lane Group [s/veh]	41.85	31.64	31.98	21.83	24.29	21.23	10.60	22.67	23.48	12.71	19.41	19.44
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	4.01	3.89	1.88	5.92	1.66	1.05	8.35	7.97	0.87	5.25	5.22
50th-Percentile Queue Length [ft]	6.49	100.25	97.24	47.06	148.02	41.41	26.20	208.72	199.17	21.82	131.13	130.55
95th-Percentile Queue Length [veh]	0.47	7.22	7.00	3.39	9.91	2.98	1.89	13.09	12.60	1.57	9.00	8.97
95th-Percentile Queue Length [ft]	11.69	180.45	175.03	84.71	247.78	74.53	47.17	327.19	314.89	39.27	225.03	224.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.85	31.77	31.98	21.83	24.29	21.23	10.60	22.95	23.48	12.71	19.42	19.44
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.09			23.18			21.73			18.68		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.72											
Intersection LOS	C											
Intersection V/C	0.482											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	60	270	100	120	260	50	100	965	150	30	743	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	270	100	120	260	50	100	965	150	30	743	30
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	68	25	33	72	14	27	257	40	8	205	8
Total Analysis Volume [veh/h]	61	273	101	133	288	55	106	1027	160	33	819	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	7	34	34	7	46	46	35	35	35
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.52	0.52	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.06	0.14	0.07	0.07	0.15	0.04	0.06	0.32	0.33	0.07	0.23	0.23
s, saturation flow rate [veh/h]	1056	1900	1431	1810	1900	1486	1810	1900	1750	479	1900	1861
c, Capacity [veh/h]	201	471	355	149	725	567	136	981	904	141	741	726
d1, Uniform Delay [s]	37.50	29.75	27.41	40.91	20.31	17.89	40.90	15.46	15.76	36.82	21.63	21.68
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	0.42	0.16	6.92	0.13	0.03	3.60	2.91	3.51	3.86	3.28	3.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.58	0.28	0.89	0.40	0.10	0.78	0.62	0.64	0.23	0.58	0.58
d, Delay for Lane Group [s/veh]	37.81	30.17	27.57	47.83	20.44	17.92	44.51	18.38	19.27	40.68	24.91	25.08
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.25	5.06	1.72	3.13	4.22	0.71	2.42	9.00	8.89	0.82	7.53	7.46
50th-Percentile Queue Length [ft]	31.24	126.43	43.02	78.37	105.49	17.74	60.40	224.91	222.35	20.56	188.17	186.51
95th-Percentile Queue Length [veh]	2.25	8.75	3.10	5.64	7.59	1.28	4.35	13.92	13.78	1.48	12.03	11.94
95th-Percentile Queue Length [ft]	56.24	218.63	77.44	141.06	189.71	31.94	108.72	347.88	344.62	37.01	300.65	298.50



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.81	30.17	27.57	47.83	20.44	17.92	44.51	18.74	19.27	40.68	24.99	25.08
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	30.64			27.80			20.92			25.58		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.68											
Intersection LOS	C											
Intersection V/C	0.549											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.714

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└			┌└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	80	100	66	90	30	10	1255	190	20	993	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	80	100	66	90	30	10	1255	190	20	993	20
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	26	32	18	31	10	3	336	51	5	262	5
Total Analysis Volume [veh/h]	7	104	129	70	124	41	11	1344	204	21	1049	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	48	48	3	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.53	0.53	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.28	0.01	0.41	0.43	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1683	600	1810	1900	1785	1810	1900	1879
c, Capacity [veh/h]	476	170	36	1009	948	59	1034	1023
d1, Uniform Delay [s]	26.88	31.94	43.49	16.85	17.26	42.59	13.03	13.05
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	45.20	1.77	5.91	7.21	1.33	1.86	1.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.49	0.97	0.31	0.78	0.80	0.35	0.52	0.52
d, Delay for Lane Group [s/veh]	27.17	77.14	45.26	22.76	24.48	43.91	14.89	14.95
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.11	5.55	0.26	13.46	13.64	0.47	6.89	6.86
50th-Percentile Queue Length [ft]	102.74	138.87	6.43	336.52	340.94	11.86	172.21	171.49
95th-Percentile Queue Length [veh]	7.40	9.42	0.46	19.48	19.69	0.85	11.19	11.16
95th-Percentile Queue Length [ft]	184.94	235.50	11.57	486.95	492.35	21.36	279.81	278.88

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.17	27.17	0.00	77.14	77.14	45.26	23.47	24.48	43.91	14.92	14.95
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	27.17			77.14			23.76			15.48		
Approach LOS	C			E			C			B		
d_I, Intersection Delay [s/veh]	23.94											
Intersection LOS	C											
Intersection V/C	0.714											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	73.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	590	290	780	260	655	0	0	1173	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	590	290	780	260	655	0	0	1173	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	150	74	199	67	170	0	0	303	10
Total Analysis Volume [veh/h]	0	0	0	602	296	796	270	680	0	0	1211	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	15	50	31	31
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.17	0.56	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.49	0.24	0.27	0.47	0.15	0.19	0.23	0.23
s, saturation flow rate [veh/h]	900	1867	1442	900	1810	3618	3618	1853
c, Capacity [veh/h]	304	631	487	304	306	2026	1230	630
d1, Uniform Delay [s]	29.80	25.99	26.85	29.80	36.53	10.73	25.48	25.30
k, delay calibration	0.50	0.18	0.25	0.50	0.17	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	223.0	2.55	6.21	190.3	12.19	0.45	3.03	5.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.46	0.71	0.78	1.38	0.88	0.34	0.68	0.66
d, Delay for Lane Group [s/veh]	252.8	28.54	33.05	220.1	48.72	11.18	28.51	30.72
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	24.80	8.13	7.59	22.04	6.71	3.52	7.90	8.28
50th-Percentile Queue Length [ft]	619.9	203.3	189.8	550.9	167.83	88.10	197.59	207.04
95th-Percentile Queue Length [veh]	39.98	12.81	12.11	35.28	10.96	6.34	12.51	13.00
95th-Percentile Queue Length [ft]	999.5	320.2	302.8	881.8	274.06	158.58	312.86	325.03



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	185.67	28.63	136.92	48.72	11.18	0.00	0.00	29.19	30.72
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			135.66			21.85			29.24		
Approach LOS	A			F			C			C		
d_I, Intersection Delay [s/veh]	73.71											
Intersection LOS	E											
Intersection V/C	0.872											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤵⤴⤵						⤵⤴⤵			⤵⤴⤵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	180	380	260	0	0	0	0	735	710	820	993	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	380	260	0	0	0	0	735	710	820	993	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	122	83	0	0	0	0	199	192	220	267	0
Total Analysis Volume [veh/h]	230	487	333	0	0	0	0	797	770	881	1067	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22		27	27	27	28	59
g / C, Green / Cycle	0.24	0.24	0.24		0.29	0.29	0.29	0.31	0.66
(v / s)_i Volume / Saturation Flow Rate	0.20	0.20	0.21		0.22	0.26	0.26	0.25	0.29
s, saturation flow rate [veh/h]	1843	1729	1564		3618	1494	1494	3514	3618
c, Capacity [veh/h]	443	415	376		1068	441	441	1094	2379
d1, Uniform Delay [s]	32.53	32.52	33.03		28.56	30.32	30.32	28.51	7.49
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.72	2.83		0.37	2.48	2.48	6.35	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

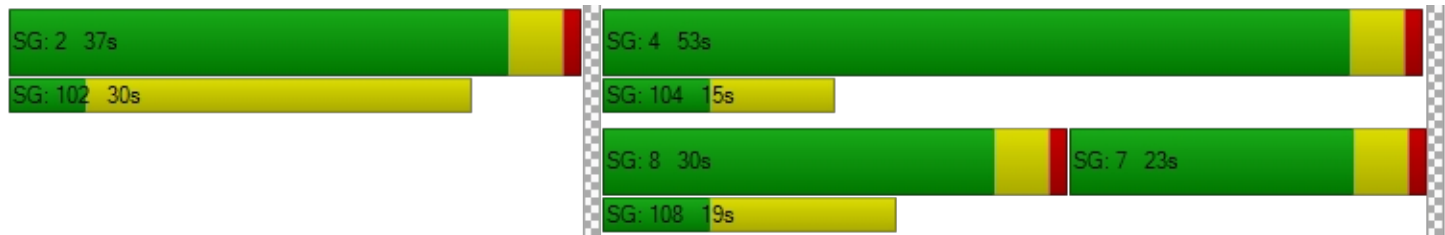
X, volume / capacity	0.84	0.84	0.89		0.73	0.89	0.89	0.81	0.45
d, Delay for Lane Group [s/veh]	34.15	34.25	35.86		28.93	32.80	32.80	34.87	8.10
Lane Group LOS	C	C	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.56	7.10	7.02		7.32	8.02	8.02	9.39	4.50
50th-Percentile Queue Length [ft]	188.97	177.56	175.56		182.93	200.39	200.39	234.72	112.39
95th-Percentile Queue Length [veh]	12.07	11.47	11.37		11.75	12.66	12.66	14.41	7.97
95th-Percentile Queue Length [ft]	301.69	286.83	284.20		293.84	316.46	316.46	360.35	199.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.15	34.22	35.86	0.00	0.00	0.00	0.00	28.93	32.80	34.87	8.10	0.00
Movement LOS	C	C	D					C	C	C	A	
d_A, Approach Delay [s/veh]	34.72			0.00			30.87			20.21		
Approach LOS	C			A			C			C		
d_I, Intersection Delay [s/veh]	27.20											
Intersection LOS	C											
Intersection V/C	0.726											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.761

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	160	470	120	170	370	70	110	1125	110	80	963	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	470	120	170	370	70	110	1125	110	80	963	80
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	120	31	49	107	20	31	315	31	23	281	23
Total Analysis Volume [veh/h]	163	479	122	198	430	81	123	1259	123	93	1125	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	33	33	14	34	34	10	49	49	5	45	45
g / C, Green / Cycle	0.11	0.27	0.27	0.12	0.29	0.29	0.08	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.09	0.25	0.08	0.11	0.14	0.14	0.07	0.35	0.08	0.05	0.31	0.06
s, saturation flow rate [veh/h]	1810	1900	1565	1810	1900	1777	1810	3618	1565	1810	3618	1571
c, Capacity [veh/h]	191	515	424	218	544	509	149	1488	644	82	1354	588
d1, Uniform Delay [s]	52.79	42.65	34.59	52.12	35.48	35.56	54.21	31.89	22.57	57.31	34.12	24.99
k, delay calibration	0.04	0.29	0.11	0.29	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.16	17.57	0.37	28.04	0.66	0.73	4.26	6.10	0.66	72.91	6.06	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.93	0.29	0.91	0.48	0.49	0.82	0.85	0.19	1.13	0.83	0.16
d, Delay for Lane Group [s/veh]	56.95	60.22	34.96	80.16	36.14	36.29	58.47	37.99	23.22	130.21	40.18	25.56
Lane Group LOS	E	E	C	F	D	D	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	5.01	16.09	2.85	7.53	6.39	6.09	3.80	17.20	2.32	4.13	15.63	1.85
50th-Percentile Queue Length [ft]	125.16	402.23	71.21	188.16	159.75	152.24	95.09	429.97	58.04	103.15	390.76	46.21
95th-Percentile Queue Length [veh]	8.68	22.67	5.13	12.03	10.54	10.14	6.85	24.00	4.18	7.43	22.11	3.33
95th-Percentile Queue Length [ft]	216.90	566.69	128.17	300.64	263.39	253.41	171.16	600.01	104.47	185.67	552.85	83.18

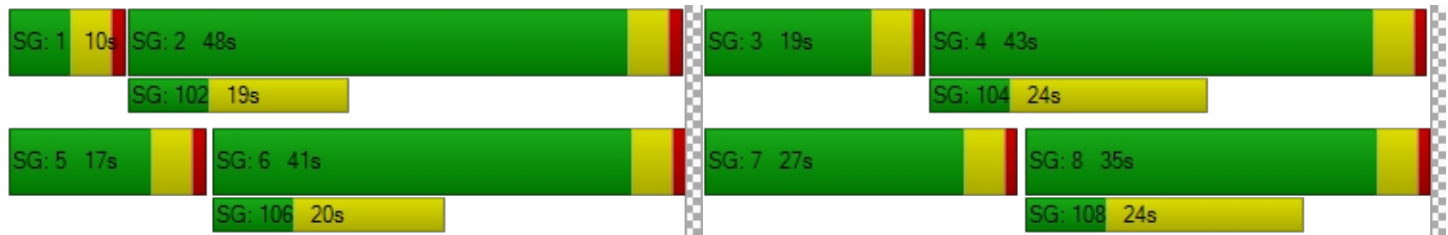


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.95	60.22	34.96	80.16	36.20	36.29	58.47	37.99	23.22	130.21	40.18	25.56
Movement LOS	E	E	C	F	D	D	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.49			48.49			38.46			45.53		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	45.31											
Intersection LOS	D											
Intersection V/C	0.761											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	30	583	20	92	467	50	70	390	64	80	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	583	20	92	467	50	70	390	64	80	380	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	155	5	25	126	13	21	116	19	22	104	11
Total Analysis Volume [veh/h]	32	619	21	99	503	54	83	465	76	88	416	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.04	0.17	0.17	0.12	0.15	0.15	0.09	0.24	0.05	0.09	0.25
s, saturation flow rate [veh/h]	864	1900	1874	799	1900	1828	944	1900	1568	940	1862
c, Capacity [veh/h]	454	1011	998	416	1011	973	203	670	553	205	657
d1, Uniform Delay [s]	13.92	10.53	10.54	16.01	10.28	10.29	33.98	22.19	17.62	33.99	22.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.06
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.83	0.84	1.35	0.69	0.72	0.49	0.66	0.04	0.53	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.32	0.32	0.24	0.28	0.28	0.41	0.69	0.14	0.43	0.70
d, Delay for Lane Group [s/veh]	14.22	11.36	11.38	17.36	10.97	11.02	34.47	22.85	17.66	34.52	23.01
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.37	3.14	3.11	1.32	2.69	2.62	1.53	7.07	0.91	1.62	7.03
50th-Percentile Queue Length [ft]	9.23	78.45	77.77	32.90	67.15	65.42	38.13	176.67	22.68	40.55	175.68
95th-Percentile Queue Length [veh]	0.66	5.65	5.60	2.37	4.83	4.71	2.75	11.43	1.63	2.92	11.37
95th-Percentile Queue Length [ft]	16.62	141.21	139.98	59.23	120.87	117.75	68.63	285.67	40.83	73.00	284.36

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.22	11.37	11.38	17.36	10.99	11.02	34.47	22.85	17.66	34.52	23.01	23.01
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.51			11.95			23.76			24.86		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.61											
Intersection LOS	B											
Intersection V/C	0.417											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	140	580	10	30	510	50	140	452	50	40	298	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	580	10	30	510	50	140	452	50	40	298	90
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	162	3	8	139	14	40	130	14	11	81	24
Total Analysis Volume [veh/h]	156	648	11	33	556	55	161	521	58	44	324	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	35	35	35	35	35
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.19	0.17	0.17	0.04	0.16	0.16	0.15	0.31	0.05	0.17	0.06
s, saturation flow rate [veh/h]	822	1900	1887	787	1900	1828	1071	1859	848	1900	1573
c, Capacity [veh/h]	407	960	953	388	960	924	329	729	146	746	617
d1, Uniform Delay [s]	20.13	13.33	13.33	17.39	13.16	13.18	31.23	24.12	40.36	20.02	17.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.18	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.72	0.98	0.99	0.43	0.89	0.94	0.42	3.30	0.43	0.15	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.38	0.34	0.34	0.09	0.32	0.33	0.49	0.79	0.30	0.43	0.16
d, Delay for Lane Group [s/veh]	22.85	14.31	14.32	17.82	14.05	14.12	31.65	27.42	40.78	20.17	17.75
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.60	3.96	3.94	0.46	3.66	3.57	3.09	10.84	0.94	4.75	1.27
50th-Percentile Queue Length [ft]	65.08	98.92	98.43	11.56	91.42	89.31	77.24	270.96	23.59	118.86	31.79
95th-Percentile Queue Length [veh]	4.69	7.12	7.09	0.83	6.58	6.43	5.56	16.24	1.70	8.33	2.29
95th-Percentile Queue Length [ft]	117.14	178.06	177.17	20.81	164.56	160.77	139.03	405.93	42.46	208.26	57.21

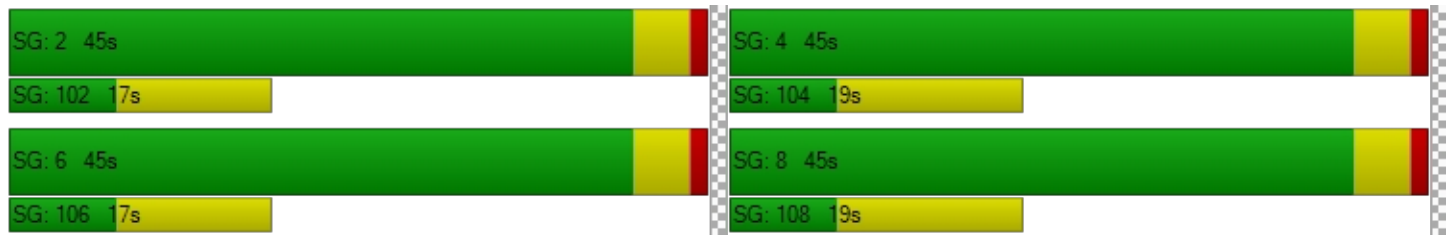


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.85	14.32	14.32	17.82	14.08	14.12	31.65	27.42	27.42	40.78	20.17	17.75
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	15.95			14.28			28.34			21.61		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.97											
Intersection LOS	B											
Intersection V/C	0.501											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	460	40	0	500	50	50	120	70	40	187	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	460	40	0	500	50	50	120	70	40	187	40
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	125	11	0	148	15	14	34	20	12	57	12
Total Analysis Volume [veh/h]	32	498	43	0	591	59	57	136	80	48	227	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.00	0.35	0.17	0.15	0.03
s, saturation flow rate [veh/h]	794	1853	878	1844	1596	1782	1522
c, Capacity [veh/h]	178	784	252	780	749	826	646
d1, Uniform Delay [s]	26.92	14.15	0.00	15.47	11.80	11.66	10.30
k, delay calibration	0.04	0.08	0.04	0.18	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.77	0.00	3.93	1.37	1.08	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

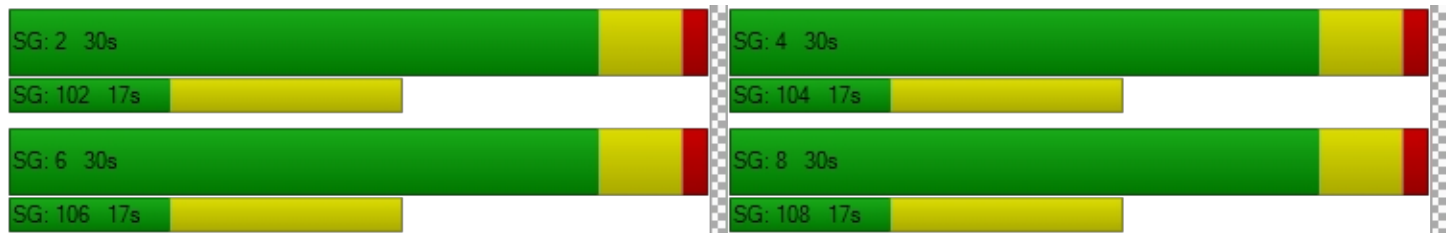
X, volume / capacity	0.18	0.69	0.00	0.83	0.36	0.33	0.07
d, Delay for Lane Group [s/veh]	27.10	14.92	0.00	19.40	13.17	12.74	10.52
Lane Group LOS	C	B	A	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.32	0.00	7.62	2.46	2.41	0.37
50th-Percentile Queue Length [ft]	10.71	133.04	0.00	190.55	61.46	60.31	9.34
95th-Percentile Queue Length [veh]	0.77	9.10	0.00	12.15	4.43	4.34	0.67
95th-Percentile Queue Length [ft]	19.29	227.62	0.00	303.74	110.63	108.55	16.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.10	14.92	14.92	0.00	19.40	19.40	13.17	13.17	13.17	12.74	12.74	10.52
Movement LOS	C	B	B	A	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.60			19.40			13.17			12.41		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.03											
Intersection LOS	B											
Intersection V/C	0.524											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	922	78	50	811	40	65	250	100	120	347	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	922	78	50	811	40	65	250	100	120	347	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	243	21	13	210	10	20	76	31	32	93	8
Total Analysis Volume [veh/h]	42	971	82	52	841	41	79	306	122	128	371	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.07	0.28	0.28	0.10	0.23	0.24	0.08	0.16	0.08	0.12	0.20	0.02
s, saturation flow rate [veh/h]	634	1900	1833	543	1900	1851	1017	1900	1532	1072	1900	1551
c, Capacity [veh/h]	353	1077	1039	296	1077	1049	212	604	487	256	604	493
d1, Uniform Delay [s]	14.62	10.43	10.47	17.03	9.79	9.82	33.58	22.16	20.20	32.43	23.10	18.98
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	1.63	1.72	1.29	1.17	1.22	0.40	0.24	0.10	0.56	0.38	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.50	0.50	0.18	0.41	0.42	0.37	0.51	0.25	0.50	0.61	0.06
d, Delay for Lane Group [s/veh]	15.31	12.06	12.19	18.32	10.96	11.04	33.99	22.40	20.30	33.00	23.48	19.00
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.51	5.34	5.23	0.72	4.14	4.10	1.45	4.51	1.64	2.38	5.81	0.41
50th-Percentile Queue Length [ft]	12.81	133.41	130.80	18.03	103.57	102.46	36.25	112.66	40.90	59.49	145.30	10.25
95th-Percentile Queue Length [veh]	0.92	9.12	8.98	1.30	7.46	7.38	2.61	7.99	2.95	4.28	9.77	0.74
95th-Percentile Queue Length [ft]	23.05	228.12	224.59	32.46	186.43	184.43	65.24	199.70	73.63	107.08	244.14	18.46

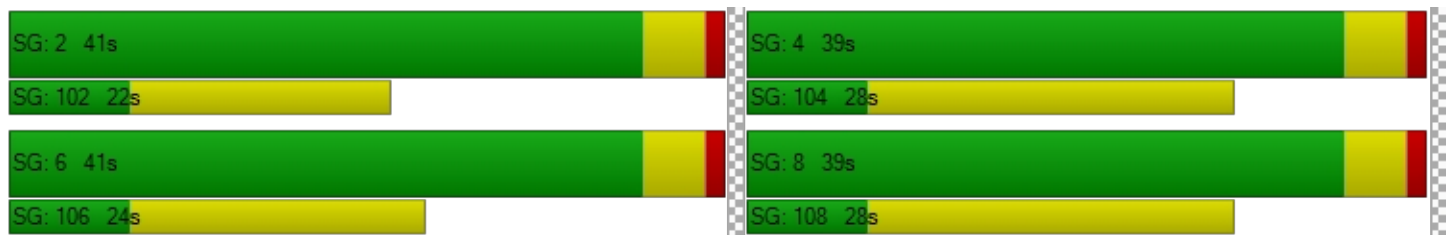


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.31	12.12	12.19	18.32	11.00	11.04	33.99	22.40	20.30	33.00	23.48	19.00
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	12.25			11.41			23.70			25.50		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.18											
Intersection LOS	B											
Intersection V/C	0.479											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.405

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	126	80	40	79	60	40	315	80	40	435	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	126	80	40	79	60	40	315	80	40	435	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	36	23	10	20	15	11	87	22	11	120	6
Total Analysis Volume [veh/h]	23	143	91	41	81	62	44	347	88	44	481	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	54	54	54	54	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.67	0.67	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.04	0.05	0.18	0.06	0.04	0.25	0.01
s, saturation flow rate [veh/h]	1693	1325	1575	927	1900	1559	1046	1900	1545
c, Capacity [veh/h]	406	339	332	579	1281	1051	682	1281	1042
d1, Uniform Delay [s]	29.23	26.59	25.88	9.36	5.18	4.49	7.85	5.67	4.29
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.64	0.27	0.26	0.52	0.16	0.18	0.84	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

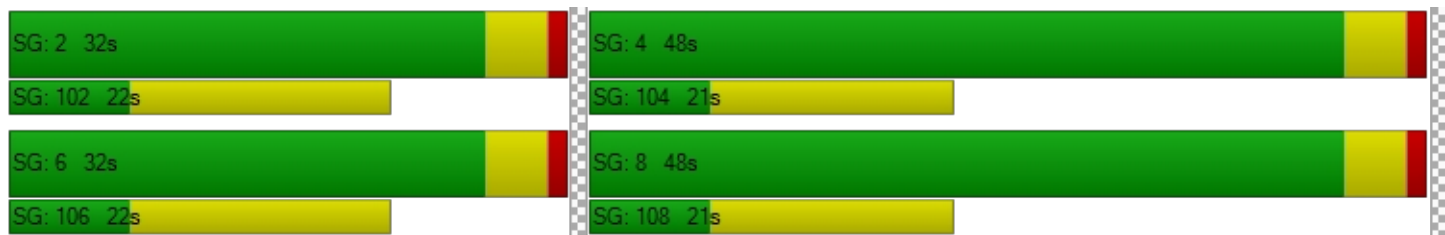
X, volume / capacity	0.63	0.36	0.19	0.08	0.27	0.08	0.06	0.38	0.02
d, Delay for Lane Group [s/veh]	30.87	27.23	26.15	9.61	5.70	4.64	8.04	6.51	4.33
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.54	1.94	0.95	0.39	2.03	0.45	0.34	3.10	0.11
50th-Percentile Queue Length [ft]	113.50	48.47	23.86	9.80	50.73	11.27	8.61	77.42	2.69
95th-Percentile Queue Length [veh]	8.03	3.49	1.72	0.71	3.65	0.81	0.62	5.57	0.19
95th-Percentile Queue Length [ft]	200.86	87.24	42.95	17.65	91.32	20.28	15.50	139.36	4.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.87	30.87	30.87	27.23	27.23	26.15	9.61	5.70	4.64	8.04	6.51	4.33
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.87			26.87			5.86			6.54		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	13.13											
Intersection LOS	B											
Intersection V/C	0.405											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	646	50	70	490	65	40	400	0	135	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	646	50	70	490	65	40	400	0	135	380	40
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	168	13	18	128	17	11	107	0	36	101	11
Total Analysis Volume [veh/h]	21	671	52	73	514	68	43	426	0	144	405	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	29	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.19	0.10	0.16	0.16	0.04	0.22	0.00	0.15	0.21	0.03
s, saturation flow rate [veh/h]	843	1900	1842	740	1900	1809	993	1900	1615	974	1900	1577
c, Capacity [veh/h]	424	983	953	364	983	936	263	698	593	249	698	579
d1, Uniform Delay [s]	14.92	11.49	11.51	17.54	10.99	11.02	28.40	20.56	0.00	32.76	20.28	16.40
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	1.08	1.13	1.24	0.79	0.84	0.11	0.68	0.00	0.79	0.42	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.37	0.37	0.20	0.30	0.31	0.16	0.61	0.00	0.58	0.58	0.07
d, Delay for Lane Group [s/veh]	15.14	12.57	12.64	18.78	11.78	11.86	28.51	21.24	0.00	33.55	20.70	16.42
Lane Group LOS	B	B	B	B	B	B	C	C	A	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.25	3.84	3.76	1.02	2.96	2.87	0.70	6.25	0.00	2.70	5.82	0.50
50th-Percentile Queue Length [ft]	6.31	95.92	94.05	25.56	74.00	71.76	17.52	156.30	0.00	67.56	145.47	12.40
95th-Percentile Queue Length [veh]	0.45	6.91	6.77	1.84	5.33	5.17	1.26	10.35	0.00	4.86	9.77	0.89
95th-Percentile Queue Length [ft]	11.36	172.65	169.28	46.00	133.19	129.17	31.54	258.81	0.00	121.61	244.37	22.32



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.14	12.60	12.64	18.78	11.81	11.86	28.51	21.24	0.00	33.55	20.70	16.42
Movement LOS	B	B	B	B	B	B	C	C	A	C	C	B
d_A, Approach Delay [s/veh]	12.67			12.59			21.91			23.51		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.02											
Intersection LOS	B											
Intersection V/C	0.418											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	448	40	70	355	40	40	400	77	90	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	448	40	70	355	40	40	400	77	90	360	40
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	124	11	19	98	11	11	112	21	24	95	11
Total Analysis Volume [veh/h]	33	498	44	77	391	44	45	446	86	95	382	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	23	23	23	23	23	23
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.26	0.03	0.08	0.21	0.03	0.04	0.23	0.06	0.10	0.20	0.03
s, saturation flow rate [veh/h]	1006	1900	1556	913	1900	1555	1002	1900	1518	946	1900	1533
c, Capacity [veh/h]	462	1026	840	384	1026	840	269	624	498	227	624	503
d1, Uniform Delay [s]	14.95	10.02	7.61	18.26	9.31	7.61	25.49	20.61	16.72	29.34	19.74	16.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	1.64	0.12	1.17	1.08	0.12	0.11	0.58	0.06	0.46	0.37	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.49	0.05	0.20	0.38	0.05	0.17	0.72	0.17	0.42	0.61	0.08
d, Delay for Lane Group [s/veh]	15.25	11.66	7.73	19.43	10.38	7.73	25.60	21.18	16.78	29.80	20.10	16.24
Lane Group LOS	B	B	A	B	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.36	4.41	0.29	0.99	3.18	0.29	0.64	6.02	0.93	1.51	4.92	0.44
50th-Percentile Queue Length [ft]	8.97	110.13	7.29	24.85	79.46	7.29	15.89	150.50	23.36	37.65	123.00	11.06
95th-Percentile Queue Length [veh]	0.65	7.85	0.53	1.79	5.72	0.53	1.14	10.04	1.68	2.71	8.56	0.80
95th-Percentile Queue Length [ft]	16.15	196.18	13.13	44.72	143.03	13.13	28.61	251.10	42.05	67.77	213.94	19.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.25	11.66	7.73	19.43	10.38	7.73	25.60	21.18	16.78	29.80	20.10	16.24
Movement LOS	B	B	A	B	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.57			11.52			20.87			21.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.39											
Intersection LOS	B											
Intersection V/C	0.497											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	370	10	140	420	130	40	417	180	140	290	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	370	10	140	420	130	40	417	180	140	290	70
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	107	3	43	128	40	11	116	50	36	75	18
Total Analysis Volume [veh/h]	46	427	12	171	513	159	45	464	200	145	301	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.06	0.12	0.12	0.18	0.18	0.19	0.04	0.24	0.13	0.15	0.16	0.05
s, saturation flow rate [veh/h]	777	1900	1879	963	1900	1729	1084	1900	1563	936	1900	1565
c, Capacity [veh/h]	326	923	913	430	923	840	413	716	589	302	716	590
d1, Uniform Delay [s]	18.89	10.46	10.46	18.52	11.33	11.36	18.62	17.95	15.56	25.68	16.12	14.23
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	0.61	0.62	2.73	1.19	1.33	0.04	0.37	0.13	0.44	0.15	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.24	0.24	0.40	0.38	0.38	0.11	0.65	0.34	0.48	0.42	0.12
d, Delay for Lane Group [s/veh]	19.80	11.07	11.08	21.25	12.52	12.69	18.66	18.32	15.68	26.12	16.27	14.27
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.68	2.26	2.25	2.25	3.06	2.86	0.52	5.73	2.13	2.17	3.32	0.71
50th-Percentile Queue Length [ft]	17.11	56.59	56.26	56.32	76.54	71.44	13.02	143.27	53.35	54.19	83.12	17.78
95th-Percentile Queue Length [veh]	1.23	4.07	4.05	4.05	5.51	5.14	0.94	9.66	3.84	3.90	5.98	1.28
95th-Percentile Queue Length [ft]	30.79	101.87	101.27	101.37	137.78	128.59	23.44	241.43	96.03	97.54	149.62	32.01

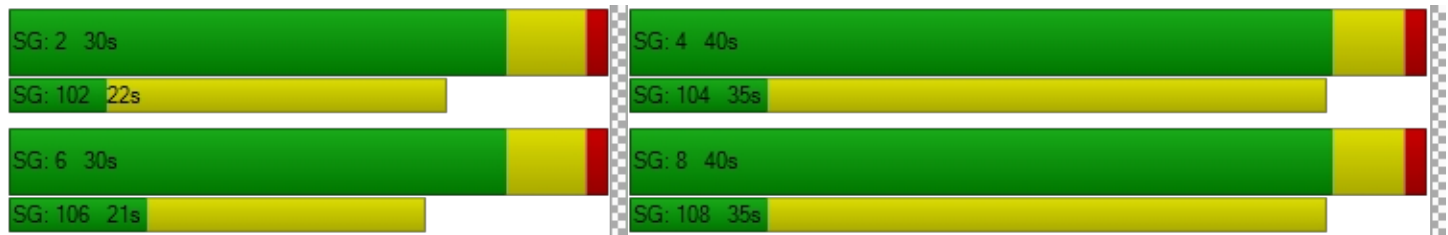


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.80	11.07	11.08	21.25	12.57	12.69	18.66	18.32	15.68	26.12	16.27	14.27
Movement LOS	B	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.90			14.35			17.60			18.74		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.68											
Intersection LOS	B											
Intersection V/C	0.431											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	520	60	50	450	27	60	57	40	34	109	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	520	60	50	450	27	60	57	40	34	109	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	154	18	14	130	8	16	15	11	10	33	6
Total Analysis Volume [veh/h]	12	618	71	58	519	31	65	61	43	41	130	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	8	8
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.01	0.37	0.08	0.27	0.02	0.10	0.11
s, saturation flow rate [veh/h]	884	1854	756	1900	1521	1622	1781
c, Capacity [veh/h]	446	921	328	944	755	522	540
d1, Uniform Delay [s]	9.29	6.80	13.17	5.88	4.36	11.03	11.17
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.47	0.09	0.19	0.01	0.13	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

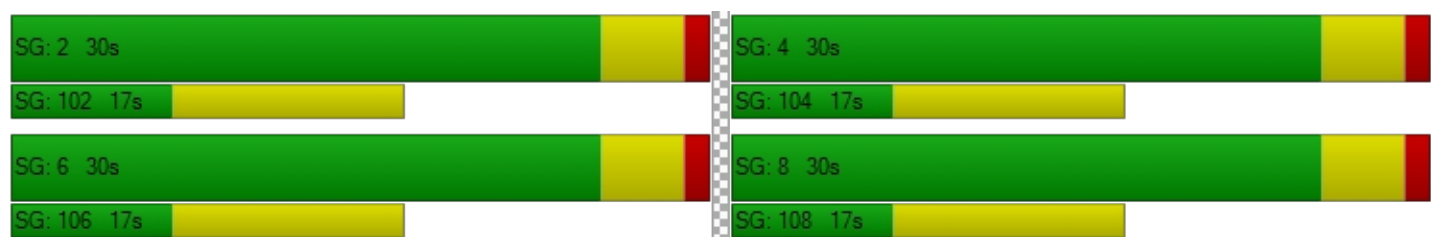
X, volume / capacity	0.03	0.75	0.18	0.55	0.04	0.32	0.36
d, Delay for Lane Group [s/veh]	9.30	7.27	13.26	6.07	4.37	11.16	11.32
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.05	2.10	0.33	1.34	0.06	0.78	0.92
50th-Percentile Queue Length [ft]	1.24	52.45	8.14	33.44	1.47	19.58	22.90
95th-Percentile Queue Length [veh]	0.09	3.78	0.59	2.41	0.11	1.41	1.65
95th-Percentile Queue Length [ft]	2.24	94.42	14.65	60.20	2.65	35.24	41.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.30	7.27	7.27	13.26	6.07	4.37	11.16	11.16	11.16	11.32	11.32	11.32
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.30			6.67			11.16			11.32		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.93											
Intersection LOS	A											
Intersection V/C	0.481											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	932	100	80	991	30	80	147	70	90	219	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	932	100	80	991	30	80	147	70	90	219	40
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	257	28	21	258	8	23	42	20	26	62	11
Total Analysis Volume [veh/h]	33	1029	110	83	1031	31	92	170	81	103	249	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.06	0.30	0.31	0.17	0.28	0.28	0.09	0.14	0.09	0.16
s, saturation flow rate [veh/h]	539	1900	1828	502	1900	1873	1079	1746	1108	1830
c, Capacity [veh/h]	298	1091	1050	273	1091	1076	252	542	275	568
d1, Uniform Delay [s]	16.10	10.42	10.45	19.35	10.07	10.09	31.56	22.20	30.58	22.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	1.85	1.94	2.86	1.57	1.60	0.33	0.23	0.31	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.53	0.53	0.30	0.49	0.49	0.36	0.46	0.37	0.52
d, Delay for Lane Group [s/veh]	16.85	12.27	12.39	22.20	11.64	11.70	31.89	22.42	30.89	22.93
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.43	5.85	5.70	1.36	5.52	5.49	1.61	3.61	1.77	4.33
50th-Percentile Queue Length [ft]	10.83	146.17	142.46	33.92	138.12	137.19	40.21	90.28	44.29	108.37
95th-Percentile Queue Length [veh]	0.78	9.81	9.61	2.44	9.38	9.33	2.89	6.50	3.19	7.75
95th-Percentile Queue Length [ft]	19.50	245.31	240.33	61.06	234.48	233.23	72.37	162.50	79.71	193.73

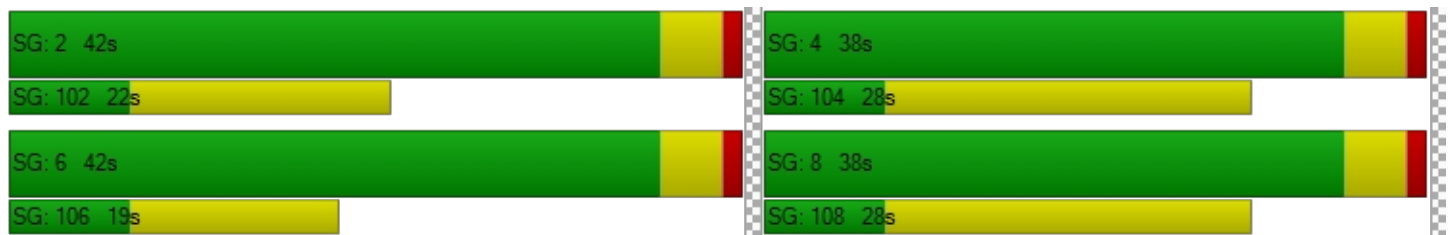


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.85	12.32	12.39	22.20	11.67	11.70	31.89	22.42	22.42	30.89	22.93	22.93
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.45			12.43			24.96			24.99		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.48											
Intersection LOS	B											
Intersection V/C	0.468											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	106	100	30	119	30	80	327	40	50	359	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	106	100	30	119	30	80	327	40	50	359	40
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	37	35	8	31	8	21	85	10	13	93	10
Total Analysis Volume [veh/h]	14	147	138	31	124	31	83	340	42	52	372	41
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	53	53	53	53
g / C, Green / Cycle	0.22	0.22	0.22	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.18	0.10	0.02	0.46	0.03	0.38	0.03
s, saturation flow rate [veh/h]	1693	1547	1529	920	1560	1129	1548
c, Capacity [veh/h]	414	389	331	668	1042	805	1034
d1, Uniform Delay [s]	29.66	26.64	24.97	10.76	4.52	8.94	4.52
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	0.66	0.12	4.52	0.07	2.46	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

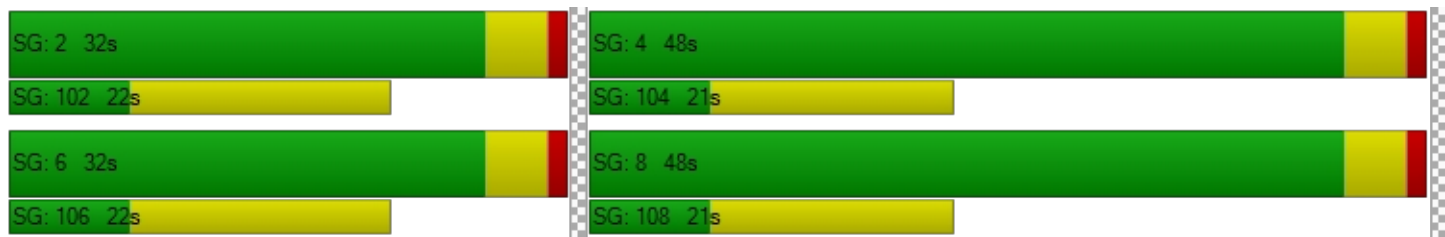
X, volume / capacity	0.72	0.40	0.09	0.63	0.04	0.53	0.04
d, Delay for Lane Group [s/veh]	32.06	27.30	25.09	15.28	4.59	11.40	4.59
Lane Group LOS	C	C	C	B	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	5.45	2.48	0.46	4.74	0.20	3.65	0.20
50th-Percentile Queue Length [ft]	136.22	61.97	11.56	118.38	5.12	91.27	5.00
95th-Percentile Queue Length [veh]	9.28	4.46	0.83	8.30	0.37	6.57	0.36
95th-Percentile Queue Length [ft]	231.92	111.54	20.81	207.59	9.21	164.28	9.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.06	32.06	32.06	27.30	27.30	25.09	15.28	15.28	4.59	11.40	11.40	4.59
Movement LOS	C	C	C	C	C	C	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	32.06			26.93			14.31			10.80		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.57											
Intersection LOS	B											
Intersection V/C	0.637											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.457

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	60	721	50	46	756	67	90	350	48	99	330	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	721	50	46	756	67	90	350	48	99	330	50
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	197	14	12	196	17	23	90	12	27	91	14
Total Analysis Volume [veh/h]	66	789	55	48	784	70	93	360	49	110	366	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.10	0.22	0.23	0.07	0.23	0.23	0.10	0.22	0.11	0.23
s, saturation flow rate [veh/h]	655	1900	1848	661	1900	1836	973	1854	990	1844
c, Capacity [veh/h]	338	1016	988	342	1016	982	213	649	223	646
d1, Uniform Delay [s]	17.21	11.15	11.17	16.55	11.20	11.22	33.77	21.67	33.70	21.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.10
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.29	1.28	1.32	0.86	1.31	1.37	0.53	0.73	0.63	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.20	0.42	0.42	0.14	0.43	0.43	0.44	0.63	0.49	0.65
d, Delay for Lane Group [s/veh]	18.50	12.43	12.49	17.41	12.51	12.59	34.30	22.40	34.33	22.87
Lane Group LOS	B	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.92	4.46	4.38	0.64	4.55	4.44	1.71	6.07	2.03	6.35
50th-Percentile Queue Length [ft]	23.10	111.61	109.51	16.12	113.80	111.08	42.68	151.82	50.82	158.85
95th-Percentile Queue Length [veh]	1.66	7.93	7.81	1.16	8.05	7.90	3.07	10.11	3.66	10.49
95th-Percentile Queue Length [ft]	41.59	198.24	195.31	29.02	201.28	197.50	76.82	252.86	91.47	262.19



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.50	12.46	12.49	17.41	12.54	12.59	34.30	22.40	22.40	34.33	22.87	22.87
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.90			12.81			24.60			25.25		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.24											
Intersection LOS	B											
Intersection V/C	0.457											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	48	547	10	20	449	40	60	290	20	120	210	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	48	547	10	20	449	40	60	290	20	120	210	66
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	151	3	6	135	12	16	75	5	30	53	17
Total Analysis Volume [veh/h]	53	602	11	24	541	48	62	302	21	121	212	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	23	23	23	23
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.06	0.32	0.01	0.03	0.28	0.03	0.06	0.17	0.11	0.16
s, saturation flow rate [veh/h]	873	1900	1552	828	1900	1541	1072	1866	1053	1756
c, Capacity [veh/h]	404	1040	849	364	1040	843	274	600	256	564
d1, Uniform Delay [s]	16.01	10.50	7.23	16.90	10.03	7.41	26.23	19.49	28.85	19.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.67	2.35	0.03	0.35	1.86	0.13	0.15	0.28	0.50	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

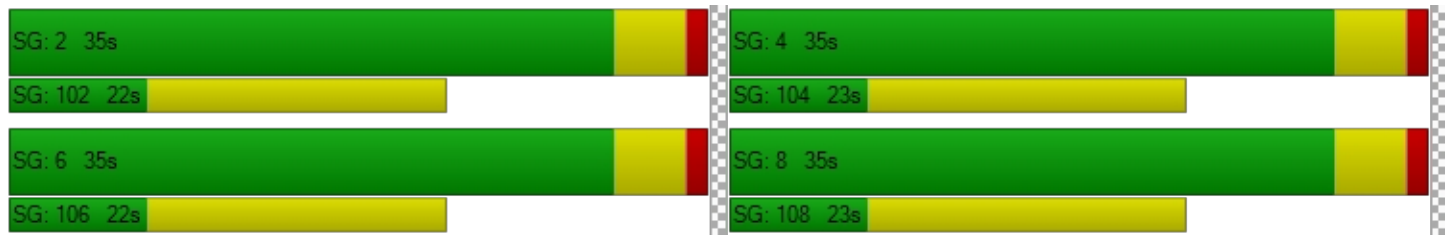
X, volume / capacity	0.13	0.58	0.01	0.07	0.52	0.06	0.23	0.54	0.47	0.49
d, Delay for Lane Group [s/veh]	16.68	12.86	7.25	17.25	11.89	7.53	26.38	19.77	29.35	19.41
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.62	5.72	0.07	0.29	4.86	0.31	0.88	3.98	1.88	3.38
50th-Percentile Queue Length [ft]	15.51	142.91	1.75	7.20	121.53	7.83	22.02	99.43	46.95	84.42
95th-Percentile Queue Length [veh]	1.12	9.64	0.13	0.52	8.48	0.56	1.59	7.16	3.38	6.08
95th-Percentile Queue Length [ft]	27.91	240.94	3.15	12.96	211.93	14.10	39.63	178.97	84.51	151.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.68	12.86	7.25	17.25	11.89	7.53	26.38	19.77	19.77	29.35	19.41	19.41
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.07			11.76			20.84			22.42		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.94											
Intersection LOS	B											
Intersection V/C	0.490											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST)\ /MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	577	180	120	444	121	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	577	180	120	444	121	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	171	53	34	125	37	24
Total Analysis Volume [veh/h]	685	214	135	499	147	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	6	6
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.36	0.14	0.18	0.26	0.08	0.06
s, saturation flow rate [veh/h]	1900	1555	762	1900	1810	1510
c, Capacity [veh/h]	1026	840	397	1026	342	285
d1, Uniform Delay [s]	5.61	4.16	11.84	4.87	12.14	11.92
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.06	0.19	0.13	0.32	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.67	0.25	0.34	0.49	0.43	0.34
d, Delay for Lane Group [s/veh]	5.90	4.22	12.03	5.00	12.46	12.18
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.62	0.37	0.72	1.01	0.83	0.54
50th-Percentile Queue Length [ft]	40.45	9.25	17.91	25.23	20.76	13.48
95th-Percentile Queue Length [veh]	2.91	0.67	1.29	1.82	1.49	0.97
95th-Percentile Queue Length [ft]	72.81	16.65	32.24	45.42	37.37	24.26

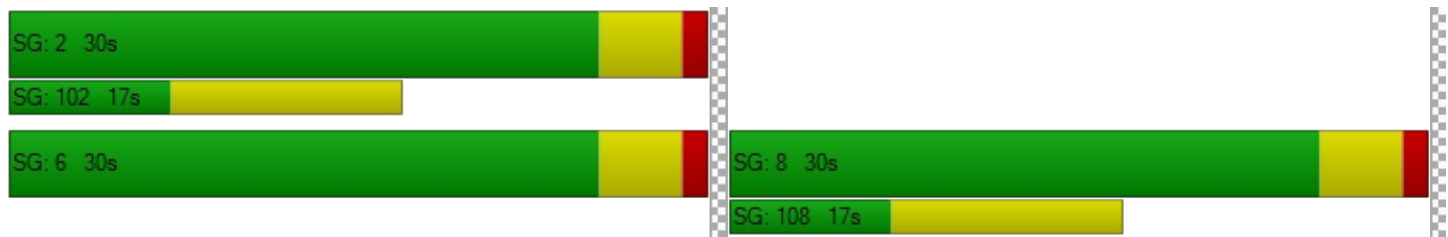


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.90	4.22	12.03	5.00	12.46	12.18
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.50		6.50		12.35	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.80					
Intersection LOS	A					
Intersection V/C	0.442					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	940	102	97	980	50	61	259	126	80	418	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	940	102	97	980	50	61	259	126	80	418	20
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	279	30	25	256	13	17	73	36	23	118	6
Total Analysis Volume [veh/h]	36	1116	121	101	1024	52	69	293	142	91	474	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.31	0.08	0.20	0.29	0.29	0.08	0.15	0.09	0.08	0.26
s, saturation flow rate [veh/h]	532	3618	1555	512	1900	1856	909	1900	1559	1091	1881
c, Capacity [veh/h]	253	1870	804	236	982	959	188	699	574	331	692
d1, Uniform Delay [s]	20.67	13.49	10.12	25.41	13.06	13.10	34.47	18.88	17.56	26.50	21.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	1.41	0.40	5.56	2.24	2.32	1.20	0.40	0.22	0.45	2.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

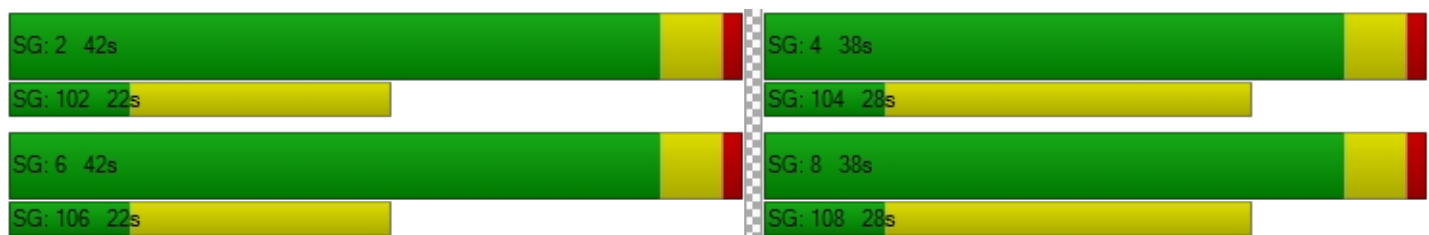
X, volume / capacity	0.14	0.60	0.15	0.43	0.55	0.56	0.37	0.42	0.25	0.28	0.72
d, Delay for Lane Group [s/veh]	21.85	14.91	10.52	30.97	15.30	15.42	35.67	19.28	17.79	26.94	23.99
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.58	6.88	1.15	1.97	6.39	6.32	1.33	3.94	1.78	1.50	8.13
50th-Percentile Queue Length [ft]	14.38	171.92	28.67	49.22	159.75	158.05	33.21	98.62	44.48	37.42	203.33
95th-Percentile Queue Length [veh]	1.04	11.18	2.06	3.54	10.54	10.45	2.39	7.10	3.20	2.69	12.81
95th-Percentile Queue Length [ft]	25.89	279.44	51.61	88.60	263.39	261.13	59.77	177.51	80.07	67.36	320.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.85	14.91	10.52	30.97	15.35	15.42	35.67	19.28	17.79	26.94	23.99	23.99
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	14.69			16.70			21.10			24.45		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.89											
Intersection LOS	B											
Intersection V/C	0.573											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	144	122	77	129	57	60	410	114	25	752	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	144	122	77	129	57	60	410	114	25	752	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	42	35	24	40	18	16	110	31	7	201	5
Total Analysis Volume [veh/h]	12	166	141	95	159	70	65	441	123	27	805	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	46	46	46	46	46
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.57	0.57	0.57	0.57	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.18	0.16	0.27	0.12	0.10	0.15	0.16	0.03	0.44
s, saturation flow rate [veh/h]	1234	1697	600	600	600	674	1900	1722	856	1887
c, Capacity [veh/h]	133	532	169	188	188	240	1086	985	492	1079
d1, Uniform Delay [s]	37.60	23.02	22.40	25.65	21.34	26.73	8.66	8.71	11.59	13.04
k, delay calibration	0.11	0.11	0.11	0.27	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.99	2.92	21.64	1.22	2.76	0.61	0.70	0.21	5.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.58	0.56	0.85	0.37	0.27	0.27	0.28	0.05	0.77
d, Delay for Lane Group [s/veh]	37.88	24.01	25.32	47.29	22.57	29.50	9.27	9.41	11.80	18.23
Lane Group LOS	D	C	C	D	C	C	A	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	4.69	1.51	3.75	1.02	1.22	2.47	2.34	0.28	11.32
50th-Percentile Queue Length [ft]	5.81	117.27	37.64	93.80	25.61	30.51	61.83	58.60	6.93	283.09
95th-Percentile Queue Length [veh]	0.42	8.24	2.71	6.75	1.84	2.20	4.45	4.22	0.50	16.84
95th-Percentile Queue Length [ft]	10.46	206.06	67.75	168.85	46.11	54.91	111.29	105.48	12.48	421.05

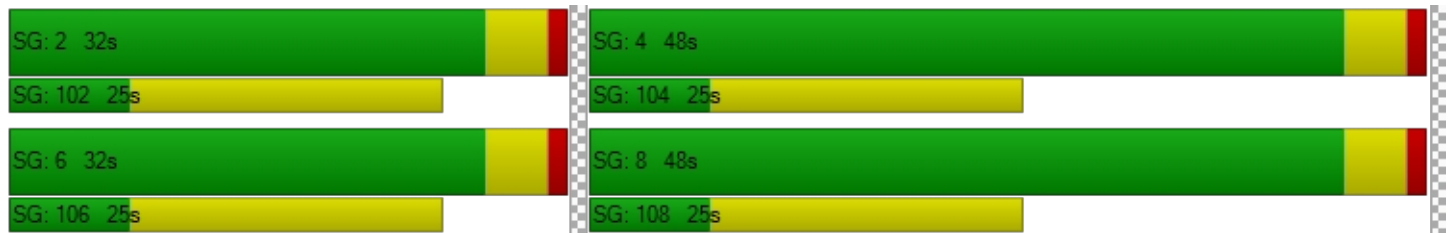


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.88	24.01	24.01	25.32	47.29	22.57	29.50	9.31	9.41	11.80	18.23	18.23
Movement LOS	D	C	C	C	D	C	C	A	A	B	B	B
d_A, Approach Delay [s/veh]	24.53			35.51			11.42			18.02		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	19.71											
Intersection LOS	B											
Intersection V/C	0.703											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	823	116	91	865	457	63	504	185	102	635	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	823	116	91	865	457	63	504	185	102	635	40
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	227	32	24	225	119	17	133	49	28	174	11
Total Analysis Volume [veh/h]	44	909	128	95	899	475	67	533	196	112	697	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	71	61	61	71	62	62	40	28	28	40	31	31
g / C, Green / Cycle	0.59	0.51	0.51	0.59	0.52	0.52	0.33	0.24	0.24	0.33	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.28	0.28	0.14	0.38	0.41	0.07	0.20	0.22	0.11	0.20	0.20
s, saturation flow rate [veh/h]	531	1900	1799	685	1900	1610	924	1900	1595	999	1900	1841
c, Capacity [veh/h]	268	971	919	385	986	835	263	447	375	267	488	472
d1, Uniform Delay [s]	18.06	19.89	19.98	13.50	22.32	23.43	29.95	43.84	44.82	31.59	41.26	41.37
k, delay calibration	0.50	0.50	0.50	0.45	0.50	0.50	0.04	0.16	0.21	0.04	0.11	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	2.20	2.39	1.37	4.72	7.33	0.19	6.70	16.77	0.39	2.71	3.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

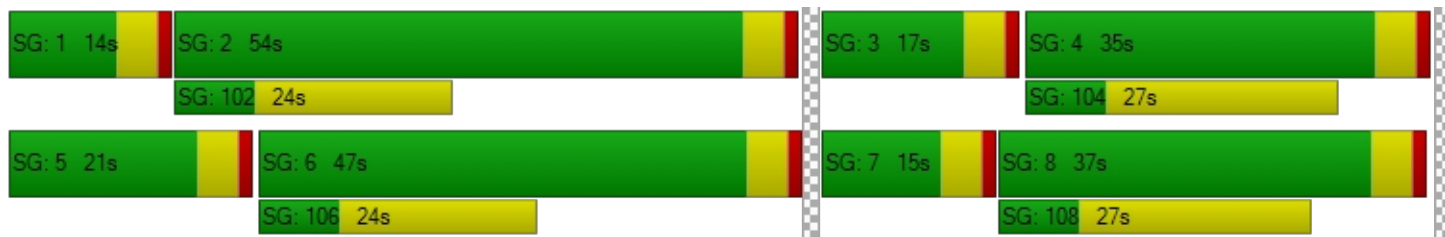
X, volume / capacity	0.16	0.55	0.55	0.25	0.73	0.79	0.26	0.85	0.93	0.42	0.77	0.78
d, Delay for Lane Group [s/veh]	19.38	22.09	22.36	14.87	27.04	30.77	30.14	50.54	61.59	31.98	43.97	44.45
Lane Group LOS	B	C	C	B	C	C	C	D	E	C	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.58	10.44	10.08	1.23	16.46	16.25	1.36	11.60	11.79	2.34	10.56	10.42
50th-Percentile Queue Length [ft]	14.61	260.92	252.01	30.70	411.48	406.19	33.96	290.09	294.85	58.40	264.10	260.48
95th-Percentile Queue Length [veh]	1.05	15.74	15.29	2.21	23.11	22.86	2.44	17.19	17.43	4.20	15.89	15.71
95th-Percentile Queue Length [ft]	26.30	393.38	382.18	55.25	577.82	571.46	61.12	429.75	435.66	105.12	397.36	392.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.38	22.21	22.36	14.87	27.79	30.77	30.14	53.69	61.59	31.98	44.19	44.45
Movement LOS	B	C	C	B	C	C	C	D	E	C	D	D
d_A, Approach Delay [s/veh]	22.11			27.92			53.65			42.60		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.28											
Intersection LOS	C											
Intersection V/C	0.683											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	40	507	140	65	419	90	100	701	120	62	643	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	507	140	65	419	90	100	701	120	62	643	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	138	38	17	108	23	27	190	33	17	174	14
Total Analysis Volume [veh/h]	44	553	153	67	431	93	109	762	130	67	698	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.05	0.29	0.10	0.08	0.23	0.06	0.15	0.24	0.25	0.11	0.20	0.20
s, saturation flow rate [veh/h]	967	1900	1569	867	1900	1564	715	1900	1771	631	1900	1827
c, Capacity [veh/h]	415	943	778	332	943	776	232	708	660	189	708	680
d1, Uniform Delay [s]	16.81	12.54	9.85	20.53	11.49	9.45	27.72	18.15	18.26	29.20	17.24	17.30
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.06	0.06	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	2.67	0.57	1.37	1.60	0.32	0.55	0.52	0.68	0.42	0.24	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.59	0.20	0.20	0.46	0.12	0.47	0.65	0.66	0.35	0.54	0.55
d, Delay for Lane Group [s/veh]	17.32	15.21	10.41	21.89	13.09	9.76	28.27	18.67	18.94	29.62	17.47	17.55
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.52	5.92	1.26	0.94	4.15	0.73	1.71	5.71	5.48	1.06	4.48	4.39
50th-Percentile Queue Length [ft]	13.08	148.09	31.44	23.48	103.80	18.26	42.80	142.74	137.11	26.59	111.93	109.66
95th-Percentile Queue Length [veh]	0.94	9.92	2.26	1.69	7.47	1.31	3.08	9.63	9.33	1.91	7.95	7.82
95th-Percentile Queue Length [ft]	23.54	247.88	56.59	42.27	186.84	32.86	77.04	240.71	233.13	47.87	198.68	195.53

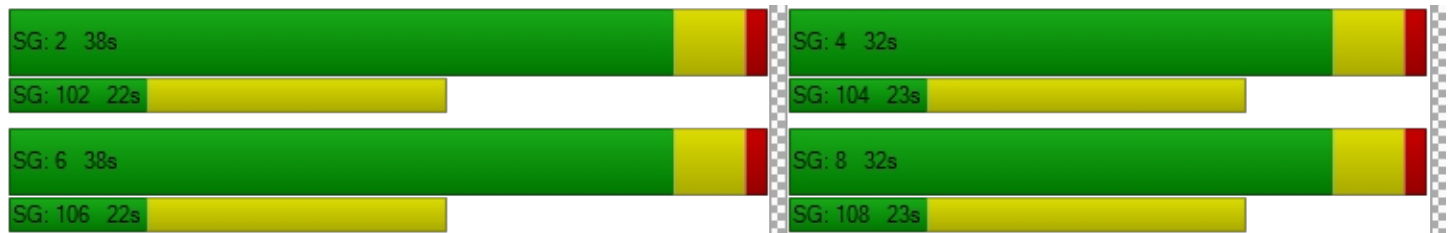


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.32	15.21	10.41	21.89	13.09	9.76	28.27	18.78	18.94	29.62	17.51	17.55
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.35			13.57			19.83			18.50		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.02											
Intersection LOS	B											
Intersection V/C	0.536											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.608

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	90	280	70	50	380	160	90	629	340	270	476	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	280	70	50	380	160	90	629	340	270	476	70
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	78	19	16	122	52	25	172	93	78	137	20
Total Analysis Volume [veh/h]	100	310	78	64	490	206	99	689	372	311	548	81
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.05	0.06	0.19	0.20	0.12	0.19	0.24	0.41	0.17	0.17
s, saturation flow rate [veh/h]	756	3618	1547	1069	1900	1661	806	3618	1554	760	1900	1797
c, Capacity [veh/h]	308	1570	672	480	825	721	338	1570	675	311	825	780
d1, Uniform Delay [s]	21.34	12.22	11.77	15.55	13.84	13.95	19.98	13.81	14.69	28.53	13.45	13.48
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.38	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.77	0.28	0.35	0.58	1.72	2.10	0.18	0.07	0.30	44.32	0.11	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

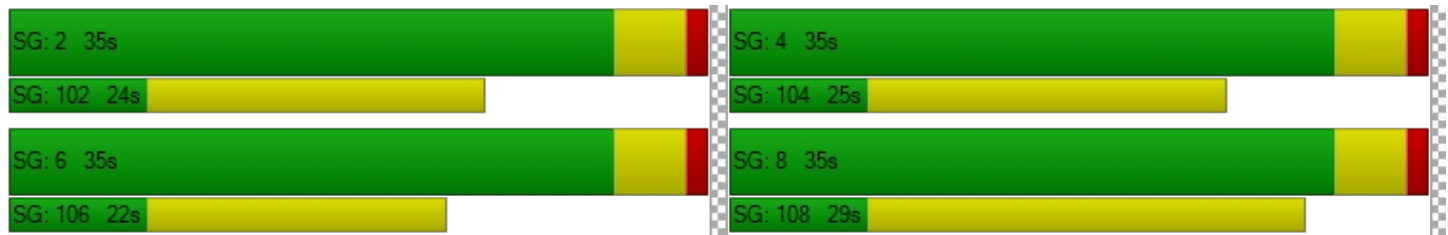
X, volume / capacity	0.32	0.20	0.12	0.13	0.44	0.46	0.29	0.44	0.55	1.00	0.39	0.39
d, Delay for Lane Group [s/veh]	24.12	12.51	12.12	16.13	15.56	16.05	20.16	13.88	14.99	72.85	13.57	13.60
Lane Group LOS	C	B	B	B	B	B	C	B	B	F	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.56	1.47	0.75	0.74	4.06	3.76	1.24	3.46	4.02	8.97	3.16	3.03
50th-Percentile Queue Length [ft]	39.01	36.83	18.74	18.39	101.47	94.12	31.09	86.59	100.46	224.21	79.06	75.75
95th-Percentile Queue Length [veh]	2.81	2.65	1.35	1.32	7.31	6.78	2.24	6.23	7.23	13.88	5.69	5.45
95th-Percentile Queue Length [ft]	70.23	66.30	33.74	33.10	182.65	169.42	55.96	155.85	180.82	347.05	142.32	136.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.12	12.51	12.12	16.13	15.68	16.05	20.16	13.88	14.99	72.85	13.58	13.60
Movement LOS	C	B	B	B	B	B	C	B	B	F	B	B
d_A, Approach Delay [s/veh]	14.82			15.82			14.77			33.19		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	20.19											
Intersection LOS	C											
Intersection V/C	0.608											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	49.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.778

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	130	640	50	120	560	50	90	949	370	242	365	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	640	50	120	560	50	90	949	370	242	365	80
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	170	13	32	151	13	26	277	108	68	102	22
Total Analysis Volume [veh/h]	138	679	53	130	604	54	105	1107	432	270	408	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	39	26	26	37	26	26	72	52	52	72	60	60
g / C, Green / Cycle	0.32	0.22	0.22	0.31	0.22	0.22	0.60	0.43	0.43	0.60	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.13	0.20	0.20	0.07	0.18	0.18	0.10	0.42	0.44	0.38	0.13	0.14
s, saturation flow rate [veh/h]	1077	1900	1839	1810	1900	1828	1032	1900	1687	704	1900	1768
c, Capacity [veh/h]	308	411	398	586	416	400	632	822	730	362	952	886
d1, Uniform Delay [s]	31.71	45.77	45.85	29.26	44.41	44.51	10.84	33.06	34.05	35.68	17.26	17.30
k, delay calibration	0.04	0.09	0.10	0.04	0.04	0.05	0.05	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	6.48	7.33	0.07	1.45	1.77	0.06	23.13	40.37	13.12	0.69	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.45	0.90	0.91	0.22	0.80	0.81	0.17	0.96	1.03	0.75	0.27	0.27
d, Delay for Lane Group [s/veh]	32.09	52.24	53.18	29.33	45.86	46.28	10.89	56.18	74.42	48.80	17.96	18.05
Lane Group LOS	C	D	D	C	D	D	B	E	F	D	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.17	12.06	11.87	2.94	10.09	9.87	1.19	26.92	28.79	4.67	4.25	4.02
50th-Percentile Queue Length [ft]	79.29	301.45	296.66	73.48	252.18	246.63	29.69	672.93	719.73	116.80	106.15	100.44
95th-Percentile Queue Length [veh]	5.71	17.75	17.52	5.29	15.30	15.02	2.14	35.43	38.36	8.22	7.63	7.23
95th-Percentile Queue Length [ft]	142.73	443.83	437.90	132.26	382.40	375.41	53.44	885.65	959.09	205.42	190.63	180.80



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.09	52.67	53.18	29.33	46.05	46.28	10.89	61.41	74.42	48.80	17.99	18.05
Movement LOS	C	D	D	C	D	D	B	E	E	D	B	B
d_A, Approach Delay [s/veh]	49.44			43.31			61.61			28.85		
Approach LOS	D			D			E			C		
d_I, Intersection Delay [s/veh]	49.29											
Intersection LOS	D											
Intersection V/C	0.778											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	27.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach						
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	752	130	0	858	328	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	752	130	0	858	328	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	35	0	242	103	0
Total Analysis Volume [veh/h]	809	140	0	969	413	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.26	0.27	0.27	0.11
s, saturation flow rate [veh/h]	1810	1747	3618	3618
c, Capacity [veh/h]	510	493	2227	2227
d1, Uniform Delay [s]	31.40	31.77	9.06	7.49
k, delay calibration	0.36	0.38	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.54	27.10	0.62	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.93	0.96	0.44	0.19
d, Delay for Lane Group [s/veh]	51.95	58.86	9.68	7.67
Lane Group LOS	D	E	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	11.88	12.74	4.64	1.62
50th-Percentile Queue Length [ft]	296.93	318.62	115.89	40.55
95th-Percentile Queue Length [veh]	17.53	18.60	8.17	2.92
95th-Percentile Queue Length [ft]	438.23	464.98	204.16	73.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	54.80	58.86	0.00	9.68	7.67	0.00
Movement LOS	D	E		A	A	
d_A, Approach Delay [s/veh]	55.40		9.68		7.67	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	27.94					
Intersection LOS	C					
Intersection V/C	0.539					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	40	40	868	10	7	428	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	40	40	868	10	7	428	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	12	12	252	3	2	128	9
Total Analysis Volume [veh/h]	42	53	74	12	61	49	46	1008	12	8	514	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	66	66	66	66	66
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.11	0.07	0.05	0.27	0.27	0.14	0.15
s, saturation flow rate [veh/h]	1605	1741	870	1900	1890	1900	1850
c, Capacity [veh/h]	305	320	657	1404	1397	1404	1367
d1, Uniform Delay [s]	35.35	34.17	5.39	4.19	4.19	3.58	3.59
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	0.28	0.21	0.73	0.74	0.31	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.55	0.38	0.07	0.36	0.36	0.20	0.20
d, Delay for Lane Group [s/veh]	35.94	34.45	5.59	4.92	4.92	3.89	3.93
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	2.37	0.31	2.84	2.83	1.30	1.31
50th-Percentile Queue Length [ft]	85.35	59.26	7.68	70.93	70.70	32.39	32.63
95th-Percentile Queue Length [veh]	6.14	4.27	0.55	5.11	5.09	2.33	2.35
95th-Percentile Queue Length [ft]	153.62	106.66	13.82	127.68	127.27	58.29	58.73

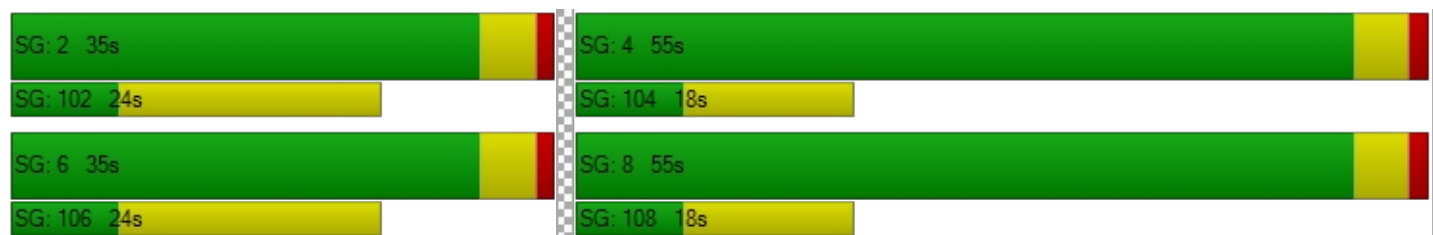


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.94	35.94	35.94	34.45	34.45	34.45	5.59	4.92	4.92	0.00	3.91	3.93
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.94			34.45			4.95			3.91		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.28											
Intersection LOS	A											
Intersection V/C	0.375											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	680	40	70	750	270	77	348	60	260	178	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	680	40	70	750	270	77	348	60	260	178	70
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	206	12	19	201	72	22	100	17	74	50	20
Total Analysis Volume [veh/h]	109	824	48	75	803	289	89	400	69	294	202	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	43	35	35	43	34	34	21	21	21	38	38	47
g / C, Green / Cycle	0.48	0.39	0.39	0.48	0.38	0.38	0.23	0.23	0.23	0.42	0.42	0.52
(v / s)_j Volume / Saturation Flow Rate	0.15	0.23	0.24	0.09	0.30	0.33	0.08	0.13	0.13	0.23	0.11	0.05
s, saturation flow rate [veh/h]	745	1900	1831	810	1900	1594	1151	1900	1754	1282	1900	1522
c, Capacity [veh/h]	315	738	712	384	711	596	241	440	407	548	797	797
d1, Uniform Delay [s]	18.48	21.92	22.04	14.67	25.23	26.24	36.14	30.43	30.60	19.04	17.00	10.78
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.00	3.53	3.82	0.09	9.32	16.35	0.35	0.39	0.46	0.31	0.06	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

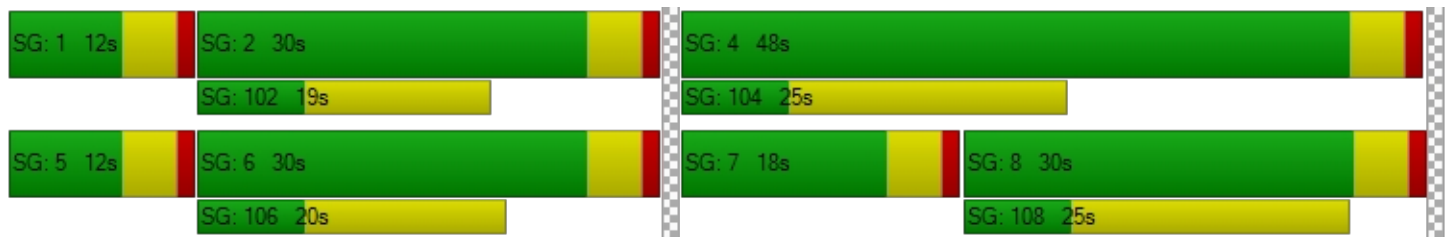
X, volume / capacity	0.35	0.60	0.61	0.20	0.80	0.87	0.37	0.54	0.56	0.54	0.25	0.10
d, Delay for Lane Group [s/veh]	21.48	25.45	25.86	14.76	34.55	42.60	36.49	30.82	31.06	19.35	17.06	10.80
Lane Group LOS	C	C	C	B	C	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.41	7.69	7.62	0.79	12.04	12.41	1.80	4.47	4.31	4.14	2.65	0.76
50th-Percentile Queue Length [ft]	35.30	192.18	190.52	19.63	301.08	310.25	45.02	111.64	107.73	103.55	66.27	18.99
95th-Percentile Queue Length [veh]	2.54	12.23	12.15	1.41	17.73	18.19	3.24	7.93	7.71	7.46	4.77	1.37
95th-Percentile Queue Length [ft]	63.54	305.85	303.70	35.34	443.36	454.69	81.03	198.28	192.84	186.39	119.28	34.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.48	25.64	25.86	14.76	36.88	42.60	36.49	30.92	31.06	19.35	17.06	10.80
Movement LOS	C	C	C	B	D	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	25.19			36.87			31.83			17.37		
Approach LOS	C			D			C			B		
d_I, Intersection Delay [s/veh]	29.10											
Intersection LOS	C											
Intersection V/C	0.616											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	40	944	61	71	1124	20	73	62	59	30	163	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	944	61	71	1124	20	73	62	59	30	163	40
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	251	16	20	310	6	23	19	18	10	52	13
Total Analysis Volume [veh/h]	43	1003	65	78	1240	22	91	78	74	38	208	51
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	20	20
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.10	0.28	0.29	0.15	0.33	0.33	0.21	0.18
s, saturation flow rate [veh/h]	446	1900	1849	536	1900	1886	1153	1686
c, Capacity [veh/h]	284	1205	1173	342	1205	1197	351	473
d1, Uniform Delay [s]	14.13	7.47	7.49	13.12	8.01	8.02	28.21	26.89
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	1.20	1.25	1.55	1.64	1.66	0.92	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.45	0.45	0.23	0.52	0.53	0.69	0.63
d, Delay for Lane Group [s/veh]	15.26	8.67	8.74	14.66	9.65	9.68	29.13	27.41
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.54	4.19	4.12	0.94	5.31	5.29	4.36	4.89
50th-Percentile Queue Length [ft]	13.47	104.68	103.06	23.43	132.75	132.29	108.96	122.35
95th-Percentile Queue Length [veh]	0.97	7.54	7.42	1.69	9.09	9.06	7.78	8.52
95th-Percentile Queue Length [ft]	24.24	188.42	185.50	42.18	227.23	226.60	194.56	213.05

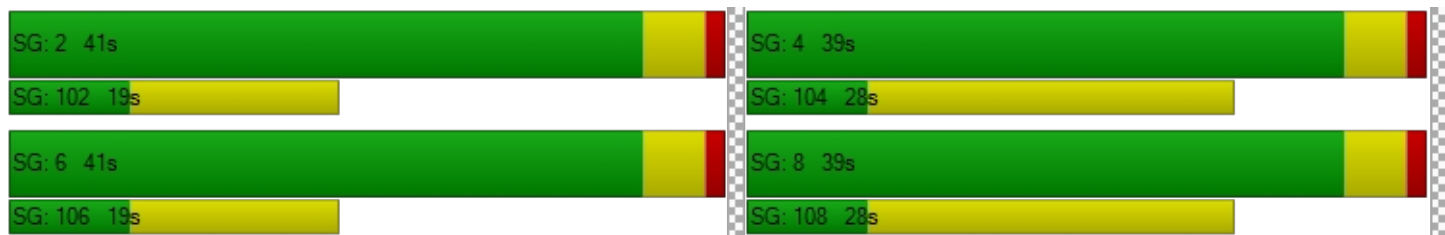


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.26	8.70	8.74	14.66	9.66	9.68	29.13	29.13	29.13	27.41	27.41	27.41
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.96			9.96			29.13			27.41		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.88											
Intersection LOS	B											
Intersection V/C	0.544											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.692

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	83	944	50	20	1441	159	247	70	98
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	83	944	50	20	1441	159	247	70	98
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	21	244	13	5	391	43	76	21	30
Total Analysis Volume [veh/h]	0	0	0	86	977	52	22	1565	173	303	86	120
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		83	83	83	83	83	83	28	28
g / C, Green / Cycle		0.69	0.69	0.69	0.69	0.69	0.69	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate		0.30	0.27	0.28	0.04	0.46	0.47	0.22	0.08
s, saturation flow rate [veh/h]		282	1900	1854	557	1900	1826	1775	1571
c, Capacity [veh/h]		173	1315	1283	371	1315	1263	411	363
d1, Uniform Delay [s]		30.88	7.82	7.84	12.19	10.53	10.79	45.32	38.32
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.36	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		9.79	0.89	0.92	0.31	2.67	3.02	26.68	0.20
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.50	0.39	0.40	0.06	0.67	0.68	0.95	0.33
d, Delay for Lane Group [s/veh]		40.66	8.71	8.77	12.50	13.20	13.80	72.00	38.51
Lane Group LOS		D	A	A	B	B	B	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		2.58	5.60	5.53	0.31	13.32	13.55	14.24	2.94
50th-Percentile Queue Length [ft]		64.55	140.12	138.27	7.71	332.90	338.69	355.91	73.48
95th-Percentile Queue Length [veh]		4.65	9.49	9.39	0.55	19.30	19.58	20.42	5.29
95th-Percentile Queue Length [ft]		116.18	237.18	234.69	13.87	482.51	489.60	510.61	132.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	40.66	8.74	8.77	12.50	13.47	13.80	72.00	72.00	38.51
Movement LOS				D	A	A	B	B	B	E	E	D
d_A, Approach Delay [s/veh]	0.00			11.20			13.49			64.11		
Approach LOS	A			B			B			E		
d_I, Intersection Delay [s/veh]	20.35											
Intersection LOS	C											
Intersection V/C	0.692											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌			⇌⇌			⇌⇌			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	940	70	111	960	20	240	10	223	0	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	940	70	111	960	20	240	10	223	0	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	252	19	29	247	5	67	3	63	0	4	4
Total Analysis Volume [veh/h]	11	1009	75	114	988	21	269	11	250	0	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	80	80	80	21	21	5
g / C, Green / Cycle	0.57	0.57	0.67	0.67	0.67	0.18	0.18	0.04
(v / s)_j Volume / Saturation Flow Rate	0.31	0.31	0.17	0.27	0.27	0.15	0.16	0.02
s, saturation flow rate [veh/h]	1868	1665	680	1900	1883	1813	1577	1746
c, Capacity [veh/h]	1104	957	441	1273	1262	320	278	67
d1, Uniform Delay [s]	15.57	15.78	9.98	8.89	8.90	48.13	48.36	56.47
k, delay calibration	0.50	0.50	0.38	0.50	0.50	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	2.21	1.09	0.93	0.94	3.31	5.76	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.52	0.54	0.26	0.40	0.40	0.88	0.90	0.48
d, Delay for Lane Group [s/veh]	17.34	17.99	11.07	9.82	9.84	51.43	54.11	58.40
Lane Group LOS	B	B	B	A	A	D	D	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.67	8.94	1.09	5.77	5.73	8.50	7.81	0.98
50th-Percentile Queue Length [ft]	241.79	223.54	27.31	144.19	143.33	212.56	195.22	24.48
95th-Percentile Queue Length [veh]	14.77	13.85	1.97	9.71	9.66	13.28	12.39	1.76
95th-Percentile Queue Length [ft]	369.30	346.14	49.16	242.66	241.50	332.11	309.79	44.07

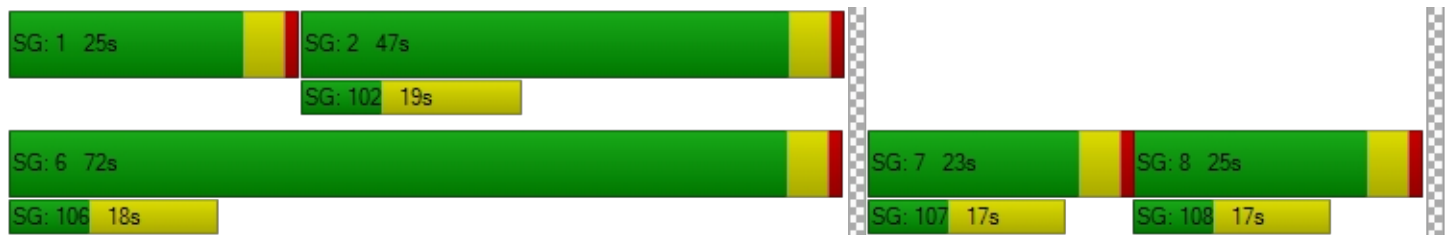


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.34	17.63	17.99	11.07	9.83	9.84	51.43	51.43	54.11	58.40	58.40	58.40
Movement LOS	B	B	B	B	A	A	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	17.65			9.96			52.70			58.40		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	21.69											
Intersection LOS	C											
Intersection V/C	0.515											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	47.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	610	60	135	650	10	160	435	220	20	171	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	610	60	135	650	10	160	435	220	20	171	20
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	158	16	37	177	3	42	114	58	5	46	5
Total Analysis Volume [veh/h]	0	632	62	147	709	11	168	457	231	21	183	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.37	0.16	0.38	0.14	0.39	0.03	0.10	0.01
s, saturation flow rate [veh/h]	1860	930	1894	1218	1781	766	1900	1560
c, Capacity [veh/h]	834	388	1061	376	601	80	641	526
d1, Uniform Delay [s]	21.84	15.60	14.03	29.88	29.80	44.98	21.85	20.02
k, delay calibration	0.50	0.32	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.51	1.81	3.50	0.31	83.64	0.63	0.09	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

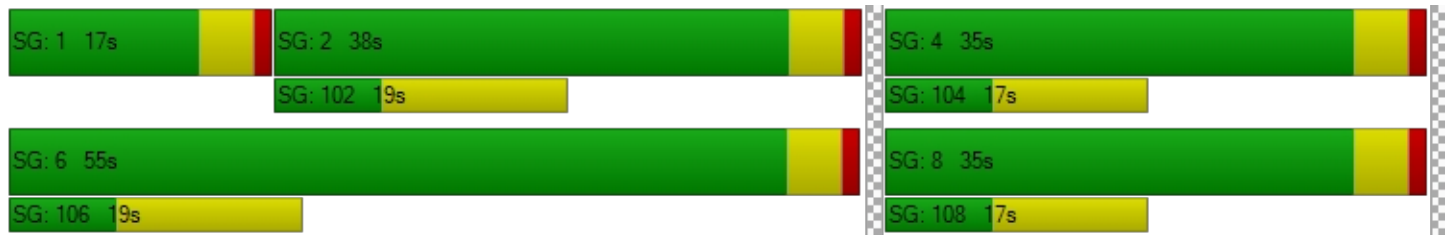
X, volume / capacity	0.83	0.38	0.68	0.45	1.14	0.26	0.29	0.04
d, Delay for Lane Group [s/veh]	31.35	17.41	17.52	30.19	113.44	45.61	21.94	20.03
Lane Group LOS	C	B	B	C	F	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	14.02	1.42	9.92	3.16	26.36	0.48	2.83	0.30
50th-Percentile Queue Length [ft]	350.51	35.51	248.09	78.89	659.02	12.08	70.76	7.44
95th-Percentile Queue Length [veh]	20.16	2.56	15.09	5.68	37.91	0.87	5.09	0.54
95th-Percentile Queue Length [ft]	504.03	63.91	377.25	142.00	947.79	21.74	127.37	13.39

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	31.35	31.35	17.41	17.52	17.52	30.19	113.44	113.44	45.61	21.94	20.03
Movement LOS		C	C	B	B	B	C	F	F	D	C	C
d_A, Approach Delay [s/veh]		31.35		17.51			97.10			23.97		
Approach LOS		C		B			F			C		
d_I, Intersection Delay [s/veh]	47.48											
Intersection LOS	D											
Intersection V/C	0.802											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.384

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	577	464	10	30	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	577	464	10	30	20
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	157	122	3	14	9
Total Analysis Volume [veh/h]	22	630	488	11	54	36
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	3
g / C, Green / Cycle	0.43	0.43	0.43	0.14
(v / s)_j Volume / Saturation Flow Rate	0.02	0.33	0.26	0.05
s, saturation flow rate [veh/h]	891	1900	1888	1726
c, Capacity [veh/h]	458	811	805	246
d1, Uniform Delay [s]	8.17	5.25	4.77	8.28
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.62	0.29	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.78	0.62	0.37
d, Delay for Lane Group [s/veh]	8.19	5.87	5.06	8.62
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.82	0.55	0.21
50th-Percentile Queue Length [ft]	1.43	20.49	13.87	5.28
95th-Percentile Queue Length [veh]	0.10	1.47	1.00	0.38
95th-Percentile Queue Length [ft]	2.57	36.87	24.97	9.50

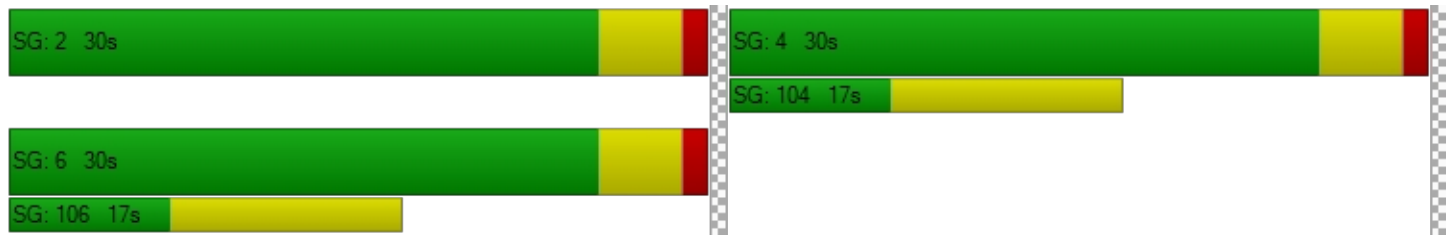


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.19	5.87	5.06	5.06	8.62	8.62
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.95		5.06		8.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.78					
Intersection LOS	A					
Intersection V/C	0.384					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.712

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	800	381	210	1068	702	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	800	381	210	1068	702	65
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	211	100	57	290	187	17
Total Analysis Volume [veh/h]	843	402	228	1158	750	69
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	61	61	17	83	28	28
g / C, Green / Cycle	0.51	0.51	0.14	0.69	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.33	0.37	0.13	0.32	0.21	0.05
s, saturation flow rate [veh/h]	1900	1669	1810	3618	3514	1505
c, Capacity [veh/h]	972	853	255	2499	817	350
d1, Uniform Delay [s]	21.28	22.82	50.60	8.43	44.90	37.01
k, delay calibration	0.50	0.50	0.08	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.24	5.44	7.76	0.62	1.89	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.73	0.89	0.46	0.92	0.20
d, Delay for Lane Group [s/veh]	24.52	28.26	58.36	9.05	46.79	37.12
Lane Group LOS	C	C	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	13.50	14.83	7.26	6.54	11.03	1.65
50th-Percentile Queue Length [ft]	337.47	370.74	181.53	163.45	275.67	41.25
95th-Percentile Queue Length [veh]	19.52	21.15	11.68	10.73	16.47	2.97
95th-Percentile Queue Length [ft]	488.11	528.63	292.01	268.29	411.81	74.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.50	28.26	58.36	9.05	46.79	37.12
Movement LOS	C	C	E	A	D	D
d_A, Approach Delay [s/veh]	26.39		17.16		45.97	
Approach LOS	C		B		D	
d_I, Intersection Delay [s/veh]	27.33					
Intersection LOS	C					
Intersection V/C	0.712					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	23	382	175	60	345	24	216	706	40	20	666	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	382	175	60	345	24	216	706	40	20	666	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	103	47	17	98	7	56	182	10	5	178	3
Total Analysis Volume [veh/h]	25	412	189	68	393	27	223	728	41	21	713	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	31	31	31	19	19	19
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.03	0.22	0.12	0.07	0.21	0.02	0.20	0.20	0.21	0.03	0.19	0.19
s, saturation flow rate [veh/h]	998	1900	1520	974	1900	1554	1091	1900	1841	698	1900	1878
c, Capacity [veh/h]	350	810	648	335	810	662	503	842	815	166	512	506
d1, Uniform Delay [s]	20.36	14.77	13.21	21.88	14.59	11.77	14.07	13.70	13.75	29.90	23.17	23.20
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	2.28	1.14	1.36	2.08	0.12	0.23	0.15	0.16	0.13	0.68	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.51	0.29	0.20	0.49	0.04	0.44	0.46	0.47	0.13	0.71	0.71
d, Delay for Lane Group [s/veh]	20.75	17.05	14.35	23.24	16.67	11.89	14.29	13.85	13.90	30.02	23.85	23.91
Lane Group LOS	C	B	B	C	B	B	B	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.33	4.76	1.95	0.98	4.46	0.24	2.06	3.92	3.86	0.33	5.18	5.16
50th-Percentile Queue Length [ft]	8.36	118.92	48.66	24.59	111.62	6.07	51.50	98.09	96.62	8.16	129.51	129.12
95th-Percentile Queue Length [veh]	0.60	8.33	3.50	1.77	7.93	0.44	3.71	7.06	6.96	0.59	8.91	8.89
95th-Percentile Queue Length [ft]	15.04	208.35	87.59	44.26	198.26	10.93	92.70	176.57	173.91	14.69	222.83	222.29

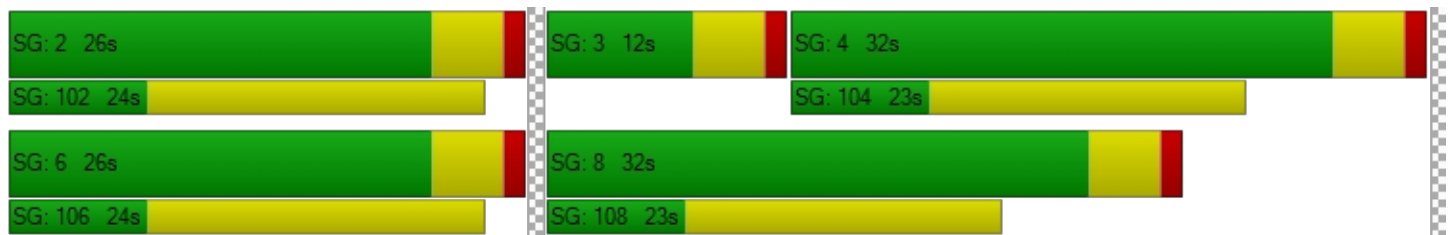


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.75	17.05	14.35	23.24	16.67	11.89	14.29	13.87	13.90	30.02	23.88	23.91
Movement LOS	C	B	B	C	B	B	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.39			17.32			13.97			24.05		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.71											
Intersection LOS	B											
Intersection V/C	0.496											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	340	360	90	450	121	250	965	80	47	745	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	340	360	90	450	121	250	965	80	47	745	30
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	91	97	27	134	36	64	246	20	12	196	8
Total Analysis Volume [veh/h]	54	365	387	107	535	144	255	983	82	50	785	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	53	8	27	27	11	63	76	6	58	58
g / C, Green / Cycle	0.05	0.20	0.44	0.07	0.22	0.22	0.09	0.53	0.64	0.05	0.48	0.48
(v / s)_j Volume / Saturation Flow Rate	0.03	0.10	0.26	0.04	0.19	0.19	0.07	0.27	0.05	0.03	0.22	0.22
s, saturation flow rate [veh/h]	1810	3618	1494	2796	1900	1711	3514	3618	1557	1810	1900	1867
c, Capacity [veh/h]	88	732	662	206	425	382	330	1907	989	86	913	897
d1, Uniform Delay [s]	55.96	42.45	25.14	56.06	44.40	44.73	53.11	18.43	8.43	55.99	20.66	20.68
k, delay calibration	0.04	0.04	0.26	0.04	0.04	0.05	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.20	1.96	0.76	1.61	2.90	1.47	1.00	0.01	2.33	1.61	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.50	0.59	0.52	0.83	0.86	0.77	0.52	0.08	0.58	0.45	0.45
d, Delay for Lane Group [s/veh]	58.50	42.64	27.11	56.82	46.01	47.63	54.58	19.43	8.44	58.32	22.26	22.33
Lane Group LOS	E	D	C	E	D	D	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.83	8.55	1.62	10.11	9.61	3.82	8.96	0.81	1.54	7.99	7.89
50th-Percentile Queue Length [ft]	41.67	120.77	213.77	40.46	252.81	240.25	95.58	224.08	20.16	38.50	199.64	197.36
95th-Percentile Queue Length [veh]	3.00	8.44	13.35	2.91	15.33	14.69	6.88	13.87	1.45	2.77	12.62	12.50
95th-Percentile Queue Length [ft]	75.00	210.88	333.67	72.83	383.19	367.35	172.04	346.82	36.29	69.30	315.51	312.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	42.64	27.11	56.82	46.56	47.63	54.58	19.43	8.44	58.32	22.29	22.33
Movement LOS	E	D	C	E	D	D	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	36.25			48.16			25.53			24.37		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.26											
Intersection LOS	C											
Intersection V/C	0.641											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	TTL			TTL			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	880	212	280	740	135	120	1310	10	89	946	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	880	212	280	740	135	120	1310	10	89	946	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	231	56	82	217	40	32	355	3	24	259	5
Total Analysis Volume [veh/h]	115	923	222	329	868	158	130	1419	11	98	1038	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	13	34	34	6	53	53	5	52	52
g / C, Green / Cycle	0.08	0.25	0.25	0.11	0.28	0.28	0.05	0.44	0.44	0.04	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.26	0.15	0.09	0.24	0.10	0.04	0.26	0.26	0.03	0.19	0.19
s, saturation flow rate [veh/h]	1810	3618	1497	3514	3618	1519	3514	3618	1890	3514	3618	1875
c, Capacity [veh/h]	141	905	374	385	1020	428	188	1604	838	153	1568	813
d1, Uniform Delay [s]	54.46	44.95	39.58	52.46	40.67	34.50	55.78	25.08	25.09	56.43	23.84	23.85
k, delay calibration	0.04	0.15	0.19	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	21.80	2.56	2.15	2.97	0.75	1.71	1.57	2.99	1.68	0.07	0.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	1.02	0.59	0.86	0.85	0.37	0.69	0.59	0.59	0.64	0.44	0.45
d, Delay for Lane Group [s/veh]	58.86	66.76	42.14	54.62	43.64	35.26	57.49	26.65	28.08	58.11	23.91	24.69
Lane Group LOS	E	F	D	D	D	D	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	16.89	6.38	4.85	12.05	3.68	1.98	10.27	11.08	1.50	6.92	7.37
50th-Percentile Queue Length [ft]	93.91	422.28	159.44	121.34	301.18	92.00	49.48	256.75	277.02	37.43	173.01	184.33
95th-Percentile Queue Length [veh]	6.76	23.91	10.52	8.47	17.74	6.62	3.56	15.53	16.54	2.69	11.23	11.83
95th-Percentile Queue Length [ft]	169.04	597.79	262.98	211.66	443.49	165.61	89.06	388.14	413.51	67.37	280.87	295.66



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	66.76	42.14	54.62	43.64	35.26	57.49	27.13	28.08	58.11	24.16	24.69
Movement LOS	E	F	D	D	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	61.70			45.33			29.67			27.05		
Approach LOS	E			D			C			C		
d_I, Intersection Delay [s/veh]	40.65											
Intersection LOS	D											
Intersection V/C	0.637											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	170	20	210	30	10	60	150	1630	60	70	1227	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	20	210	30	10	60	150	1630	60	70	1227	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	8	80	9	3	17	38	411	15	20	359	44
Total Analysis Volume [veh/h]	258	30	318	34	11	69	151	1645	61	82	1436	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	12	67	67	7	62	62
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.10	0.56	0.56	0.06	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.19	0.02	0.20	0.02	0.05	0.08	0.31	0.31	0.05	0.30	0.30
s, saturation flow rate [veh/h]	1327	1900	1610	1398	1595	1810	3618	1861	1810	3618	1791
c, Capacity [veh/h]	338	515	436	391	432	178	2013	1035	104	1864	923
d1, Uniform Delay [s]	46.46	32.36	39.69	35.78	33.53	53.16	17.13	17.15	55.78	20.04	20.07
k, delay calibration	0.14	0.04	0.15	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	0.02	3.31	0.09	0.20	4.27	1.13	2.20	4.93	1.31	2.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

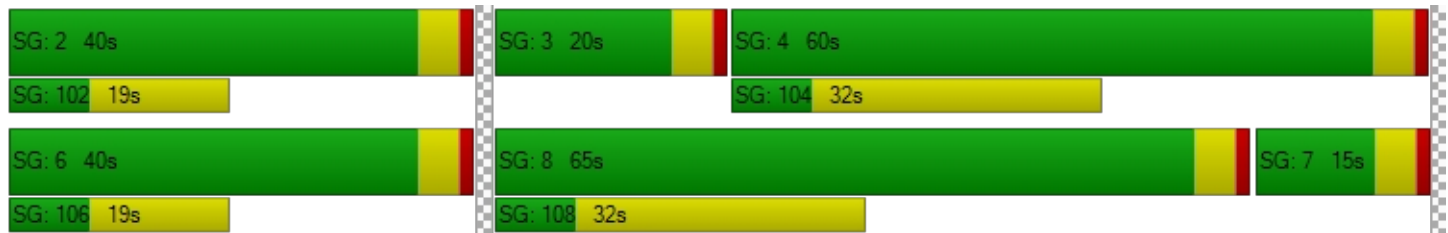
X, volume / capacity	0.76	0.06	0.73	0.09	0.19	0.85	0.56	0.56	0.79	0.58	0.58
d, Delay for Lane Group [s/veh]	51.18	32.37	43.00	35.88	33.73	57.43	18.25	19.35	60.70	21.35	22.73
Lane Group LOS	D	C	D	D	C	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.88	0.65	8.79	0.79	1.81	4.68	10.03	10.68	2.59	10.51	10.81
50th-Percentile Queue Length [ft]	196.94	16.19	219.77	19.69	45.19	117.10	250.76	267.05	64.79	262.71	270.18
95th-Percentile Queue Length [veh]	12.48	1.17	13.65	1.42	3.25	8.23	15.22	16.04	4.67	15.82	16.20
95th-Percentile Queue Length [ft]	312.02	29.15	341.33	35.45	81.34	205.83	380.61	401.05	116.63	395.62	404.97

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.18	32.37	43.00	35.88	33.73	33.73	57.43	18.60	19.35	60.70	21.70	22.73
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	45.95			34.37			21.78			23.69		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	26.31											
Intersection LOS	C											
Intersection V/C	0.580											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	36.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	430	1384	506	0	0	1477
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	430	1384	506	0	0	1477
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	112	362	137	0	0	408
Total Analysis Volume [veh/h]	450	1448	547	0	0	1632
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	90	21	75
g / C, Green / Cycle	0.29	0.75	0.17	0.63
(v / s)_i Volume / Saturation Flow Rate	0.13	0.80	0.15	0.24
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1350	627	4336
d1, Uniform Delay [s]	34.19	14.99	48.29	10.85
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	46.48	1.54	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.43	1.07	0.87	0.38
d, Delay for Lane Group [s/veh]	34.29	61.47	49.83	11.10
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	5.04	20.36	8.08	5.15
50th-Percentile Queue Length [ft]	126.01	508.88	202.04	128.82
95th-Percentile Queue Length [veh]	8.72	29.44	12.74	8.88
95th-Percentile Queue Length [ft]	218.06	736.08	318.60	221.89



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.29	61.47	49.83	0.00	0.00	11.10
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	55.02		49.83		11.10	
Approach LOS	E		D		B	
d_I, Intersection Delay [s/veh]	36.75					
Intersection LOS	D					
Intersection V/C	0.501					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.605

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	526	330	1235	713	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	526	330	1235	713	20
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	146	91	328	189	5
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	583	366	1311	757	21
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	30	81	115	115
g / C, Green / Cycle		0.25	0.25	0.67	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.16	0.23	0.37	0.20	0.21
s, saturation flow rate [veh/h]		3618	1576	3514	1900	1882
c, Capacity [veh/h]		902	393	2368	1827	1810
d1, Uniform Delay [s]		40.27	44.00	10.17	0.11	0.11
k, delay calibration		0.04	0.25	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.29	19.39	0.94	0.27	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.65	0.93	0.55	0.21	0.21
d, Delay for Lane Group [s/veh]		40.56	63.39	11.11	0.38	0.38
Lane Group LOS		D	E	B	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		7.72	12.66	8.66	0.14	0.14
50th-Percentile Queue Length [ft]		193.07	316.51	216.52	3.38	3.42
95th-Percentile Queue Length [veh]		12.28	18.50	13.49	0.24	0.25
95th-Percentile Queue Length [ft]		307.01	462.40	337.18	6.08	6.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.56	63.39	11.11	0.38	0.38
Movement LOS								D	E	B	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.37			7.11		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	20.31											
Intersection LOS	C											
Intersection V/C	0.605											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┤			┼			┆┆			┆┆┤		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	20	786	28	30	663	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	20	786	28	30	663	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	5	215	8	9	209	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	22	862	30	38	837	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.25	0.25	0.26	0.26
s, saturation flow rate [veh/h]	1560	1380	1798	1729	1681	1729
c, Capacity [veh/h]	274	280	1375	1292	1289	1292
d1, Uniform Delay [s]	43.47	46.24	5.01	5.10	4.95	5.14
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.64	0.70	0.70	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.36	0.59	0.33	0.34	0.33	0.34
d, Delay for Lane Group [s/veh]	43.77	46.97	5.65	5.80	5.65	5.87
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.51	3.45	3.34	3.56
50th-Percentile Queue Length [ft]	65.58	115.83	87.77	86.20	83.46	88.96
95th-Percentile Queue Length [veh]	4.72	8.16	6.32	6.21	6.01	6.41
95th-Percentile Queue Length [ft]	118.04	204.08	157.98	155.17	150.23	160.13

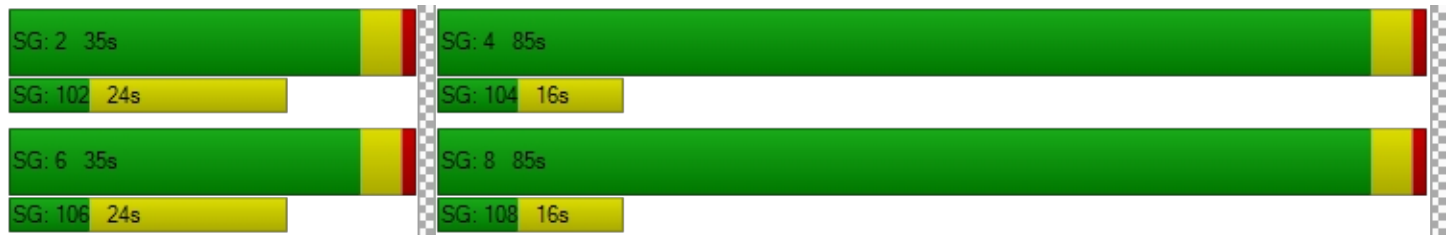


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.65	5.72	0.00	5.65	5.76	5.87
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		43.77		46.97			5.72			5.76		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	10.96											
Intersection LOS	B											
Intersection V/C	0.376											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	383	760	20	20	740	100	20	281	40	126	115	321
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	383	760	20	20	740	100	20	281	40	126	115	321
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	99	196	5	6	209	28	5	76	11	36	33	92
Total Analysis Volume [veh/h]	396	785	21	23	835	113	22	303	43	145	133	370
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	38	66	66	3	30	30	24	24	24	38	38	80
g / C, Green / Cycle	0.32	0.55	0.55	0.02	0.25	0.25	0.20	0.20	0.20	0.31	0.31	0.67
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.01	0.25	0.26	0.02	0.16	0.03	0.11	0.07	0.24
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1790	1256	1900	1480	1317	1900	1573
c, Capacity [veh/h]	1117	1042	1027	42	482	454	226	378	295	339	596	1054
d1, Uniform Delay [s]	31.43	15.54	15.56	57.96	44.76	44.76	46.00	45.77	39.62	32.28	30.39	8.55
k, delay calibration	0.50	0.50	0.50	0.04	0.43	0.45	0.04	0.11	0.04	0.04	0.04	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.88	1.09	1.12	4.16	39.29	45.84	0.07	4.00	0.08	0.32	0.07	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

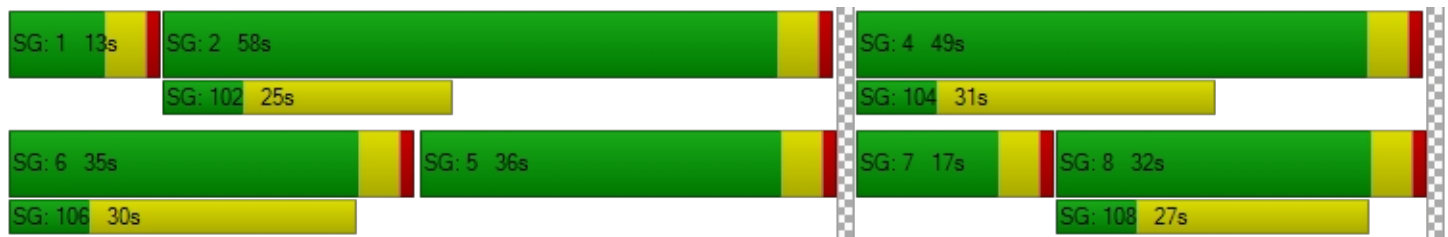
X, volume / capacity	0.35	0.39	0.39	0.55	1.00	1.02	0.10	0.80	0.15	0.43	0.22	0.35
d, Delay for Lane Group [s/veh]	32.31	16.63	16.68	62.12	84.05	90.60	46.07	49.76	39.70	32.60	30.46	8.79
Lane Group LOS	C	B	B	E	F	F	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.51	6.45	6.41	0.73	19.30	19.01	0.58	8.92	1.05	3.18	2.87	4.00
50th-Percentile Queue Length [ft]	112.82	161.21	160.19	18.36	482.51	475.14	14.56	223.00	26.28	79.54	71.77	99.94
95th-Percentile Queue Length [veh]	8.00	10.61	10.56	1.32	26.58	26.52	1.05	13.82	1.89	5.73	5.17	7.20
95th-Percentile Queue Length [ft]	199.92	265.32	263.97	33.05	664.62	662.97	26.21	345.45	47.30	143.16	129.18	179.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.31	16.65	16.68	62.12	86.80	90.60	46.07	49.76	39.70	32.60	30.46	8.79
Movement LOS	C	B	B	E	F	F	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.81			86.66			48.37			18.57		
Approach LOS	C			F			D			B		
d_I, Intersection Delay [s/veh]	43.96											
Intersection LOS	D											
Intersection V/C	0.639											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	180	670	700	60	80	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	670	700	60	80	55
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	175	182	16	22	15
Total Analysis Volume [veh/h]	188	701	727	62	90	62
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.71	0.71	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.22	0.37	0.38	0.04	0.05	0.04
s, saturation flow rate [veh/h]	849	1900	1900	1588	1810	1418
c, Capacity [veh/h]	678	1560	1357	1134	139	109
d1, Uniform Delay [s]	3.77	2.29	5.95	3.82	40.35	40.09
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	0.94	1.52	0.09	1.88	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.45	0.54	0.05	0.65	0.57
d, Delay for Lane Group [s/veh]	4.78	3.22	7.47	3.92	42.23	41.83
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.43	1.66	5.03	0.27	1.96	1.35
50th-Percentile Queue Length [ft]	10.70	41.50	125.86	6.83	49.12	33.69
95th-Percentile Queue Length [veh]	0.77	2.99	8.71	0.49	3.54	2.43
95th-Percentile Queue Length [ft]	19.27	74.71	217.85	12.30	88.41	60.64

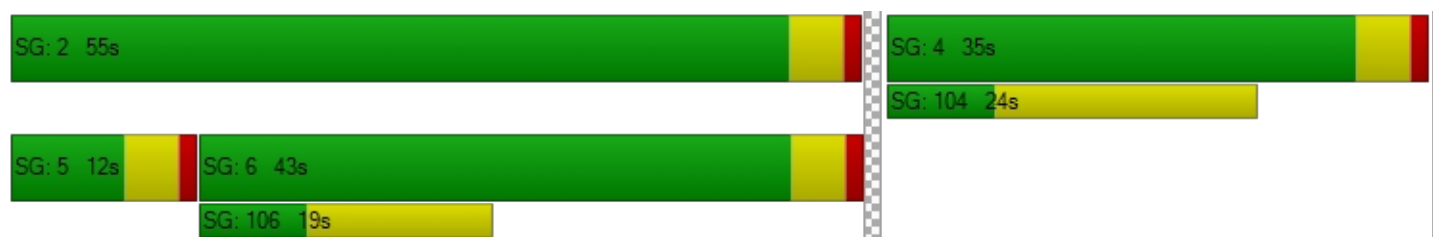


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.78	3.22	7.47	3.92	42.23	41.83
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.55		7.19		42.07	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.32					
Intersection LOS	A					
Intersection V/C	0.460					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	874	86	158	816	150	83	170	124	260	280	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	874	86	158	816	150	83	170	124	260	280	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	228	22	41	211	39	22	45	33	85	92	49
Total Analysis Volume [veh/h]	63	912	90	164	845	155	89	182	132	342	368	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	50	50	13	30	30	14	14	14	25	25	25
g / C, Green / Cycle	0.27	0.42	0.42	0.11	0.25	0.25	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.03	0.25	0.06	0.09	0.23	0.10	0.05	0.10	0.09	0.19	0.19	0.13
s, saturation flow rate [veh/h]	1810	3618	1546	1810	3618	1544	1810	1900	1448	1810	1900	1543
c, Capacity [veh/h]	491	1512	646	192	914	390	207	217	165	377	396	321
d1, Uniform Delay [s]	33.01	27.19	21.59	52.73	43.74	37.27	49.54	52.10	51.83	46.40	46.67	43.14
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.22	0.24	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	1.79	0.45	4.09	1.83	0.24	0.53	3.31	3.33	15.14	18.12	0.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

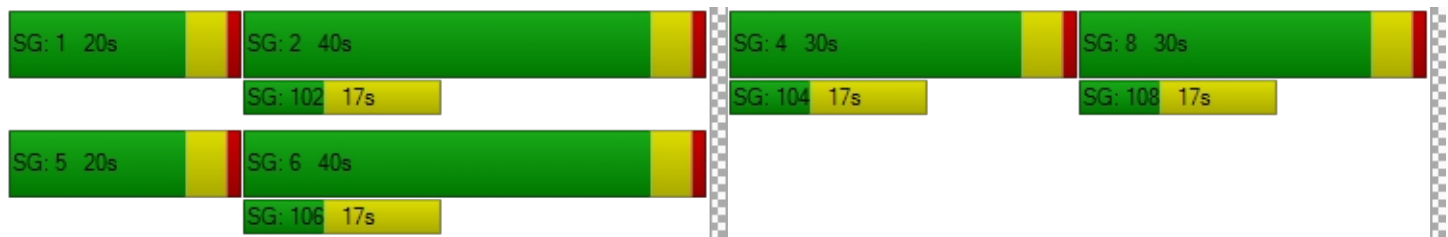
X, volume / capacity	0.13	0.60	0.14	0.85	0.92	0.40	0.43	0.84	0.80	0.91	0.93	0.61
d, Delay for Lane Group [s/veh]	33.55	28.98	22.04	56.83	45.57	37.51	50.07	55.40	55.16	61.54	64.79	43.85
Lane Group LOS	C	C	C	E	D	D	D	E	E	E	E	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.45	10.30	1.64	5.32	13.12	4.05	2.50	5.52	3.99	11.41	12.62	5.32
50th-Percentile Queue Length [ft]	36.37	257.48	40.90	132.91	328.03	101.37	62.61	137.99	99.80	285.20	315.57	133.09
95th-Percentile Queue Length [veh]	2.62	15.56	2.95	9.10	19.06	7.30	4.51	9.37	7.19	16.95	18.45	9.11
95th-Percentile Queue Length [ft]	65.46	389.06	73.63	227.45	476.54	182.47	112.70	234.32	179.64	423.68	461.24	227.69

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.55	28.98	22.04	56.83	45.57	37.51	50.07	55.40	55.16	61.54	64.79	43.85
Movement LOS	C	C	C	E	D	D	D	E	E	E	E	D
d_A, Approach Delay [s/veh]	28.67			46.08			54.15			59.02		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	45.08											
Intersection LOS	D											
Intersection V/C	0.632											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	70	440	97	50	320	50	84	397	50	100	454	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	440	97	50	320	50	84	397	50	100	454	70
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	115	25	14	88	14	25	116	15	27	124	19
Total Analysis Volume [veh/h]	73	461	102	55	352	55	98	465	59	109	495	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.07	0.31	0.06	0.22	0.11	0.24	0.04	0.12	0.26	0.05
s, saturation flow rate [veh/h]	992	1811	860	1853	916	1900	1560	941	1900	1563
c, Capacity [veh/h]	391	827	276	847	248	741	608	267	741	609
d1, Uniform Delay [s]	17.11	12.85	21.49	11.34	24.89	14.80	11.61	24.14	15.11	11.75
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	4.49	1.62	1.95	0.38	0.33	0.03	0.37	0.39	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.68	0.20	0.48	0.40	0.63	0.10	0.41	0.67	0.12
d, Delay for Lane Group [s/veh]	18.16	17.34	23.10	13.29	25.28	15.13	11.64	24.51	15.50	11.78
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.86	6.27	0.76	3.68	1.26	4.41	0.44	1.38	4.80	0.57
50th-Percentile Queue Length [ft]	21.52	156.76	18.93	92.10	31.45	110.17	10.91	34.39	119.96	14.22
95th-Percentile Queue Length [veh]	1.55	10.38	1.36	6.63	2.26	7.85	0.79	2.48	8.39	1.02
95th-Percentile Queue Length [ft]	38.73	259.43	34.07	165.79	56.61	196.24	19.64	61.90	209.77	25.59

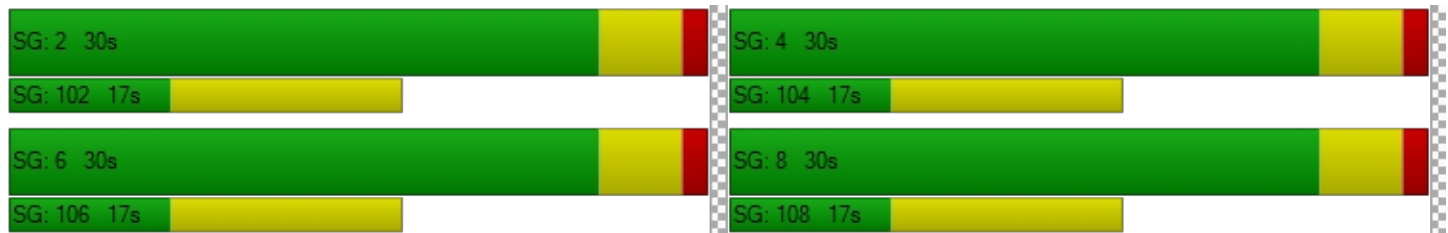


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.16	17.34	17.34	23.10	13.29	13.29	25.28	15.13	11.64	24.51	15.50	11.78
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.44			14.46			16.39			16.53		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.34											
Intersection LOS	B											
Intersection V/C	0.571											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	64	860	80	54	1119	81	80	397	104	110	534	77
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	860	80	54	1119	81	80	397	104	110	534	77
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	240	22	14	294	21	22	111	29	32	154	22
Total Analysis Volume [veh/h]	71	958	89	57	1177	85	90	445	117	127	616	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	59	48	48	59	48	48	52	40	40	52	41	41
g / C, Green / Cycle	0.49	0.40	0.40	0.49	0.40	0.40	0.43	0.33	0.33	0.43	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.11	0.28	0.28	0.08	0.34	0.34	0.09	0.23	0.08	0.11	0.32	0.06
s, saturation flow rate [veh/h]	653	1900	1826	731	1900	1831	997	1900	1545	1120	1900	1565
c, Capacity [veh/h]	275	768	738	324	761	734	257	634	515	372	641	528
d1, Uniform Delay [s]	22.75	29.58	29.70	19.53	32.42	32.69	27.35	34.80	28.83	23.92	38.98	27.93
k, delay calibration	0.50	0.50	0.50	0.07	0.50	0.50	0.15	0.15	0.04	0.04	0.36	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	5.08	5.45	0.16	10.63	11.89	1.10	2.01	0.08	0.20	22.18	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

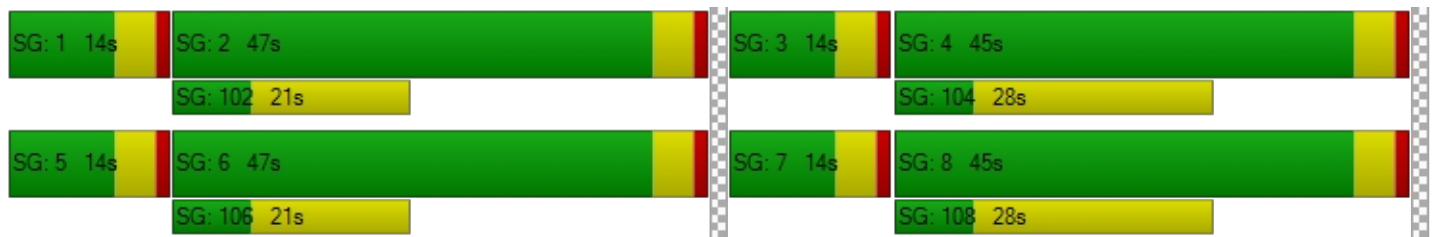
X, volume / capacity	0.26	0.69	0.70	0.18	0.84	0.85	0.35	0.70	0.23	0.34	0.96	0.17
d, Delay for Lane Group [s/veh]	25.00	34.66	35.15	19.70	43.05	44.58	28.45	36.81	28.92	24.12	61.16	27.98
Lane Group LOS	C	C	D	B	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.19	13.44	13.17	0.83	18.43	18.41	1.58	11.44	2.43	2.18	21.24	1.80
50th-Percentile Queue Length [ft]	29.86	336.04	329.15	20.72	460.86	460.16	39.46	286.11	60.70	54.60	530.90	44.94
95th-Percentile Queue Length [veh]	2.15	19.45	19.12	1.49	25.48	25.44	2.84	16.99	4.37	3.93	28.79	3.24
95th-Percentile Queue Length [ft]	53.74	486.36	477.92	37.29	636.89	636.07	71.03	424.81	109.26	98.28	719.84	80.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.00	34.88	35.15	19.70	43.75	44.58	28.45	36.81	28.92	24.12	61.16	27.98
Movement LOS	C	C	D	B	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	34.27			42.76			34.24			51.96		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	40.88											
Intersection LOS	D											
Intersection V/C	0.720											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	21	142	100	20	110	40	80	540	20	50	595	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	142	100	20	110	40	80	540	20	50	595	32
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	51	36	7	39	14	21	141	5	14	168	9
Total Analysis Volume [veh/h]	30	203	143	28	154	56	83	562	21	57	673	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	82	82	82	82
g / C, Green / Cycle	0.24	0.24	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.23	0.17	0.11	0.31	0.07	0.38
s, saturation flow rate [veh/h]	1664	1397	752	1884	844	1879
c, Capacity [veh/h]	434	371	416	1284	502	1280
d1, Uniform Delay [s]	44.36	39.87	18.66	8.79	14.62	9.75
k, delay calibration	0.27	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.19	2.35	1.07	1.16	0.46	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.87	0.64	0.20	0.45	0.11	0.55
d, Delay for Lane Group [s/veh]	56.54	42.22	19.73	9.95	15.08	11.48
Lane Group LOS	E	D	B	A	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	12.22	6.38	1.47	6.75	0.85	9.16
50th-Percentile Queue Length [ft]	305.45	159.39	36.76	168.71	21.14	229.03
95th-Percentile Queue Length [veh]	17.95	10.52	2.65	11.01	1.52	14.12
95th-Percentile Queue Length [ft]	448.76	262.92	66.16	275.22	38.05	353.12

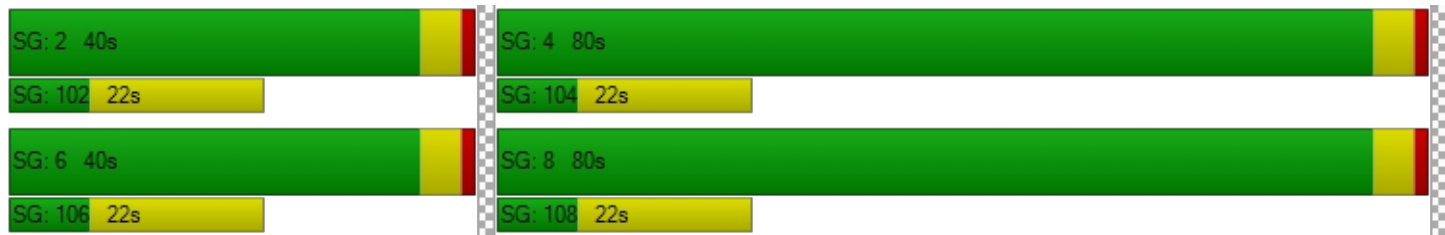


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.54	56.54	56.54	42.22	42.22	42.22	19.73	9.95	9.95	15.08	11.48	11.48
Movement LOS	E	E	E	D	D	D	B	A	A	B	B	B
d_A, Approach Delay [s/veh]	56.54			42.22			11.17			11.75		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.34											
Intersection LOS	C											
Intersection V/C	0.603											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	47	628	50	130	1094	110	80	443	10	120	501	124
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	47	628	50	130	1094	110	80	443	10	120	501	124
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	174	14	34	283	28	23	126	3	31	128	32
Total Analysis Volume [veh/h]	52	696	55	135	1134	114	91	504	11	122	510	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	54	54	65	56	56	46	34	34	46	35	35
g / C, Green / Cycle	0.54	0.45	0.45	0.54	0.47	0.47	0.38	0.28	0.28	0.38	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.09	0.20	0.20	0.15	0.33	0.34	0.09	0.27	0.01	0.11	0.27	0.09
s, saturation flow rate [veh/h]	594	1900	1837	873	1900	1804	1069	1900	1522	1106	1900	1449
c, Capacity [veh/h]	286	858	830	461	894	848	261	532	426	273	558	425
d1, Uniform Delay [s]	18.19	22.53	22.57	15.00	25.21	25.54	28.81	42.30	31.30	29.44	40.90	32.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.22	0.04	0.04	0.20	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	1.66	1.74	1.61	4.71	5.38	0.83	15.75	0.01	0.43	10.85	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

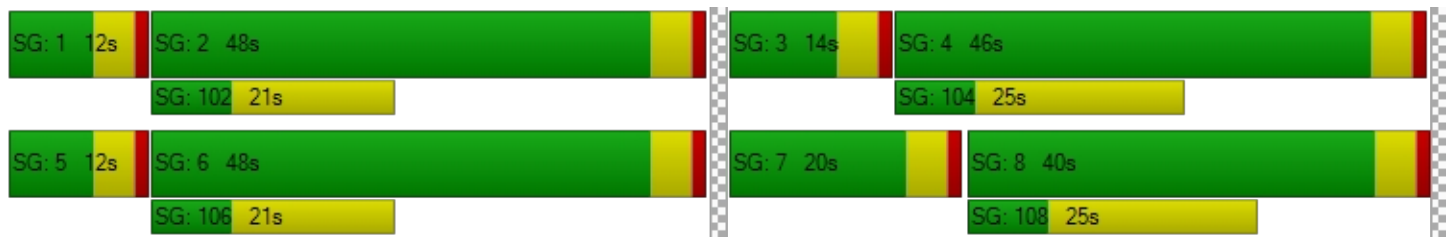
X, volume / capacity	0.18	0.44	0.45	0.29	0.71	0.73	0.35	0.95	0.03	0.45	0.91	0.30
d, Delay for Lane Group [s/veh]	19.58	24.18	24.31	16.61	29.92	30.92	29.64	58.04	31.31	29.87	51.75	32.91
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.77	7.70	7.54	2.00	15.15	15.06	1.74	16.64	0.23	2.33	15.91	2.83
50th-Percentile Queue Length [ft]	19.26	192.57	188.58	50.09	378.77	376.57	43.57	416.10	5.81	58.23	397.87	70.86
95th-Percentile Queue Length [veh]	1.39	12.25	12.05	3.61	21.53	21.43	3.14	23.33	0.42	4.19	22.46	5.10
95th-Percentile Queue Length [ft]	34.67	306.36	301.19	90.16	538.35	535.69	78.43	583.36	10.45	104.82	561.44	127.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.58	24.24	24.31	16.61	30.36	30.92	29.64	58.04	31.31	29.87	51.75	32.91
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	23.94			29.06			53.29			45.10		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.47											
Intersection LOS	D											
Intersection V/C	0.669											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.643

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	53	269	100	60	334	40	40	440	60	20	586	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	269	100	60	334	40	40	440	60	20	586	85
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	75	28	18	103	12	11	126	17	6	172	25
Total Analysis Volume [veh/h]	59	302	112	74	410	49	46	502	68	24	689	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	34	34	34	34	34	34
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.07	0.18	0.08	0.08	0.24	0.03	0.07	0.29	0.05	0.03	0.40	0.08
s, saturation flow rate [veh/h]	891	1710	1372	967	1710	1426	689	1710	1364	816	1710	1261
c, Capacity [veh/h]	255	647	520	326	647	540	168	838	668	291	838	618
d1, Uniform Delay [s]	25.80	16.41	14.71	22.42	17.77	13.99	30.79	12.89	9.58	21.31	15.25	9.89
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.12	2.41	0.95	1.61	4.67	0.33	0.33	0.50	0.02	0.04	4.93	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.47	0.22	0.23	0.63	0.09	0.27	0.60	0.10	0.08	0.82	0.16
d, Delay for Lane Group [s/veh]	27.92	18.82	15.66	24.03	22.44	14.32	31.12	13.39	9.61	21.36	20.18	9.93
Lane Group LOS	C	B	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.97	3.73	1.23	1.10	5.69	0.51	0.73	4.94	0.49	0.30	8.98	0.75
50th-Percentile Queue Length [ft]	24.34	93.22	30.82	27.41	142.15	12.65	18.24	123.53	12.26	7.40	224.57	18.63
95th-Percentile Queue Length [veh]	1.75	6.71	2.22	1.97	9.60	0.91	1.31	8.59	0.88	0.53	13.90	1.34
95th-Percentile Queue Length [ft]	43.82	167.79	55.48	49.33	239.91	22.76	32.82	214.67	22.07	13.32	347.45	33.54

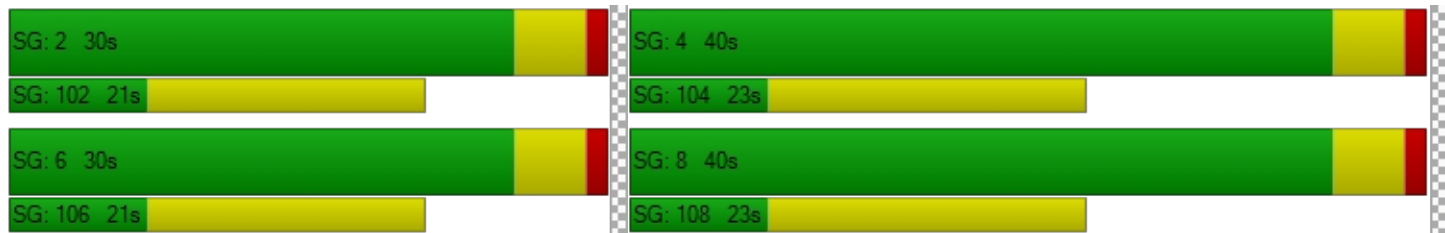


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.92	18.82	15.66	24.03	22.44	14.32	31.12	13.39	9.61	21.36	20.18	9.93
Movement LOS	C	B	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.20			21.91			14.29			18.95		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.47											
Intersection LOS	B											
Intersection V/C	0.643											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	50	277	170	130	571	130	100	330	140	120	540	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	277	170	130	571	130	100	330	140	120	540	70
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	75	46	36	157	36	27	90	38	34	151	20
Total Analysis Volume [veh/h]	54	301	185	143	630	143	109	359	152	134	603	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	39	39	39	32	21	21	32	21	21
g / C, Green / Cycle	0.54	0.54	0.54	0.43	0.43	0.43	0.36	0.23	0.23	0.36	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.06	0.16	0.12	0.13	0.21	0.21	0.10	0.19	0.10	0.11	0.18	0.19
s, saturation flow rate [veh/h]	888	1900	1544	1079	1900	1743	1065	1900	1501	1262	1900	1789
c, Capacity [veh/h]	480	1019	828	416	811	744	372	446	353	394	450	424
d1, Uniform Delay [s]	11.31	11.51	11.01	24.64	18.75	18.86	21.11	32.54	29.36	21.44	32.10	32.25
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.06	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	0.74	0.62	2.25	2.13	2.42	0.25	1.31	0.31	0.19	1.07	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

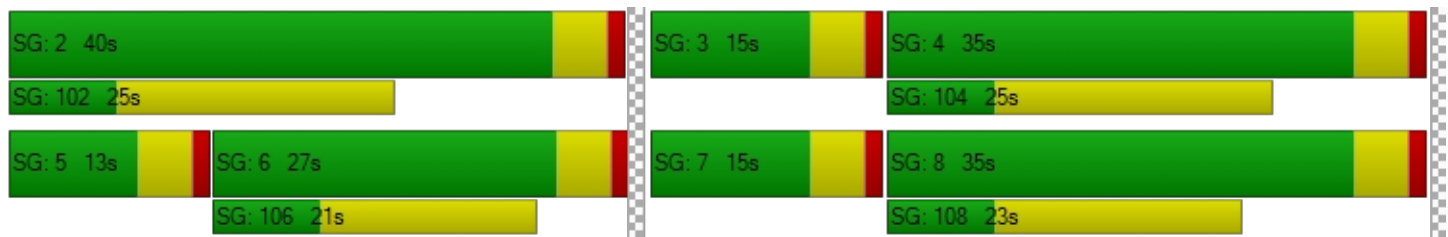
X, volume / capacity	0.11	0.30	0.22	0.34	0.49	0.50	0.29	0.80	0.43	0.34	0.77	0.79
d, Delay for Lane Group [s/veh]	11.78	12.25	11.63	26.89	20.88	21.28	21.36	33.85	29.67	21.63	33.16	33.49
Lane Group LOS	B	B	B	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.55	3.32	1.97	2.62	6.25	5.94	1.55	7.37	2.78	1.88	6.93	6.71
50th-Percentile Queue Length [ft]	13.69	83.01	49.30	65.52	156.37	148.55	38.66	184.14	69.56	47.12	173.14	167.68
95th-Percentile Queue Length [veh]	0.99	5.98	3.55	4.72	10.36	9.94	2.78	11.82	5.01	3.39	11.24	10.95
95th-Percentile Queue Length [ft]	24.64	149.41	88.73	117.93	258.92	248.49	69.58	295.42	125.21	84.82	281.04	273.86

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.78	12.25	11.63	26.89	21.03	21.28	21.36	33.85	29.67	21.63	33.30	33.49
Movement LOS	B	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.99			21.98			30.63			31.40		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.63											
Intersection LOS	C											
Intersection V/C	0.475											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	380	70	120	0	320	0	835	480	170	869	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	380	70	120	0	320	0	835	480	170	869	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	106	20	36	0	96	0	229	132	44	223	0
Total Analysis Volume [veh/h]	11	425	78	143	0	383	0	916	527	175	893	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	7	53	51	51	12	68
g / C, Green / Cycle	0.02	0.26	0.26	0.06	0.44	0.43	0.43	0.10	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.04	0.14	0.38	0.45	0.10	0.25
s, saturation flow rate [veh/h]	1810	1900	1653	3514	2818	1900	1619	1810	3618
c, Capacity [veh/h]	33	490	426	206	1239	811	691	187	2057
d1, Uniform Delay [s]	58.18	38.23	38.84	55.44	21.80	31.77	34.39	53.40	14.82
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.26	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.32	0.46	1.58	0.05	13.94	46.09	33.93	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.52	0.58	0.69	0.31	0.89	1.04	0.94	0.43
d, Delay for Lane Group [s/veh]	60.32	38.55	39.31	57.02	21.85	45.71	80.48	87.34	15.49
Lane Group LOS	E	D	D	E	C	D	F	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.54	6.38	2.17	3.51	21.20	27.58	7.26	7.79
50th-Percentile Queue Length [ft]	8.75	163.41	159.41	54.25	87.75	529.99	689.62	181.39	194.86
95th-Percentile Queue Length [veh]	0.63	10.73	10.52	3.91	6.32	28.75	37.37	11.67	12.37
95th-Percentile Queue Length [ft]	15.75	268.23	262.94	97.65	157.96	718.77	934.27	291.83	309.32



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.85	39.31	57.02	0.00	21.85	0.00	53.09	80.48	87.34	15.49	0.00
Movement LOS	E	D	D	E		C		D	F	F	B	
d_A, Approach Delay [s/veh]	39.38			31.41			63.09			27.26		
Approach LOS	D			C			E			C		
d_I, Intersection Delay [s/veh]	44.19											
Intersection LOS	D											
Intersection V/C	0.732											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↱			↵↱			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1054	20	40	1204	20	80	60	30	60	80	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1054	20	40	1204	20	80	60	30	60	80	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	292	6	11	320	5	27	20	10	18	23	3
Total Analysis Volume [veh/h]	33	1166	22	43	1280	21	107	81	40	70	94	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.31	0.31	0.09	0.34	0.34	0.16	0.12
s, saturation flow rate [veh/h]	430	1900	1884	479	1900	1887	1412	1462
c, Capacity [veh/h]	288	1255	1244	321	1255	1246	383	391
d1, Uniform Delay [s]	12.66	6.72	6.73	11.81	7.02	7.03	28.67	26.88
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	1.29	1.31	0.87	1.54	1.56	0.55	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

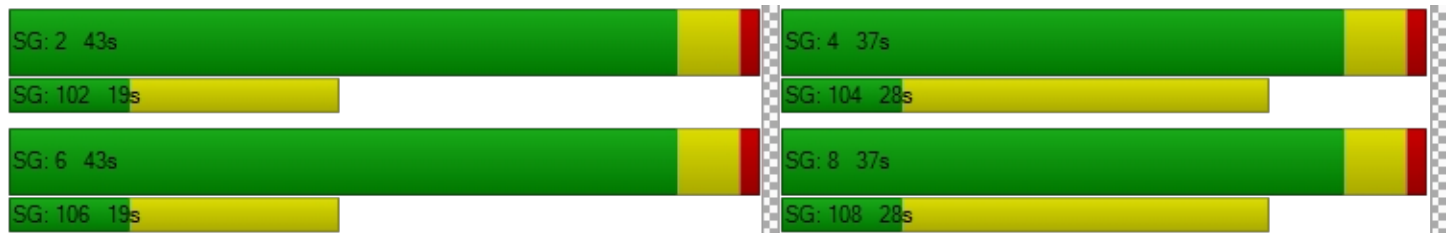
X, volume / capacity	0.11	0.47	0.48	0.13	0.52	0.52	0.59	0.45
d, Delay for Lane Group [s/veh]	13.47	8.01	8.03	12.68	8.57	8.59	29.23	27.18
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.38	4.31	4.29	0.48	4.95	4.94	3.93	2.83
50th-Percentile Queue Length [ft]	9.58	107.78	107.34	11.88	123.85	123.47	98.33	70.66
95th-Percentile Queue Length [veh]	0.69	7.72	7.69	0.86	8.60	8.58	7.08	5.09
95th-Percentile Queue Length [ft]	17.25	192.92	192.30	21.38	215.11	214.59	177.00	127.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.47	8.02	8.03	12.68	8.58	8.59	29.23	29.23	29.23	27.18	27.18	27.18
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.17			8.71			29.23			27.18		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.16											
Intersection LOS	B											
Intersection V/C	0.505											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	668	30	50	1234	40	50	130	10	80	140	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	668	30	50	1234	40	50	130	10	80	140	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	191	9	13	332	11	18	47	4	24	43	12
Total Analysis Volume [veh/h]	34	763	34	54	1328	43	72	188	14	97	170	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.08	0.21	0.21	0.08	0.36	0.36	0.19	0.23
s, saturation flow rate [veh/h]	402	1900	1861	689	1900	1873	1423	1381
c, Capacity [veh/h]	232	1144	1120	416	1144	1127	459	450
d1, Uniform Delay [s]	18.23	8.03	8.04	12.07	9.93	9.96	24.60	26.54
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	0.85	0.87	0.65	2.35	2.42	0.46	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.35	0.35	0.13	0.60	0.61	0.60	0.70
d, Delay for Lane Group [s/veh]	19.55	8.88	8.92	12.72	12.28	12.38	25.07	27.43
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.51	3.31	3.27	0.59	7.20	7.17	4.31	5.45
50th-Percentile Queue Length [ft]	12.80	82.78	81.86	14.83	179.97	179.34	107.69	136.23
95th-Percentile Queue Length [veh]	0.92	5.96	5.89	1.07	11.60	11.57	7.71	9.28
95th-Percentile Queue Length [ft]	23.04	149.01	147.34	26.69	289.98	289.15	192.79	231.93

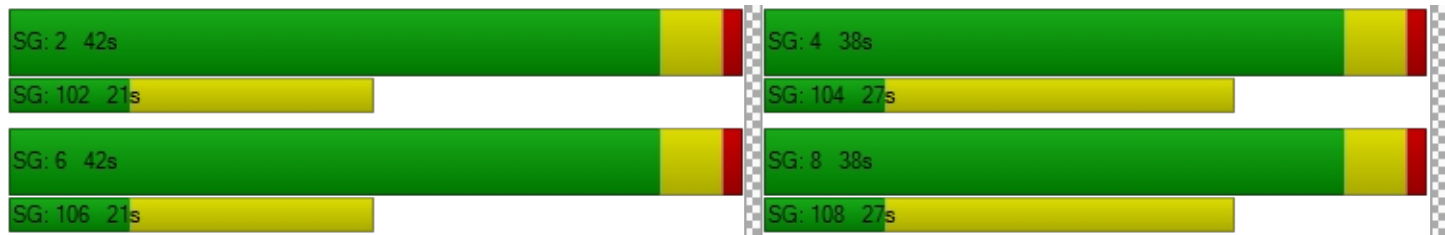


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.55	8.90	8.92	12.72	12.33	12.38	25.07	25.07	25.07	27.43	27.43	27.43
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.33			12.35			25.07			27.43		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.37											
Intersection LOS	B											
Intersection V/C	0.593											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	990	30	20	1274	150	70	90	10	170	60	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	990	30	20	1274	150	70	90	10	170	60	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	284	9	5	340	40	20	26	3	46	16	5
Total Analysis Volume [veh/h]	34	1138	34	21	1358	160	81	104	12	184	65	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25
g / C, Green / Cycle	0.58	0.58	0.58	0.58	0.58	0.58	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.10	0.31	0.31	0.04	0.40	0.41	0.25	0.01	0.19	0.01
s, saturation flow rate [veh/h]	349	1900	1877	486	1900	1813	740	1567	1300	1562
c, Capacity [veh/h]	188	1099	1086	275	1099	1049	291	480	477	479
d1, Uniform Delay [s]	22.98	10.29	10.30	15.98	11.92	12.11	28.91	19.38	23.79	19.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.11	1.87	1.91	0.54	3.70	4.17	2.24	0.01	0.33	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

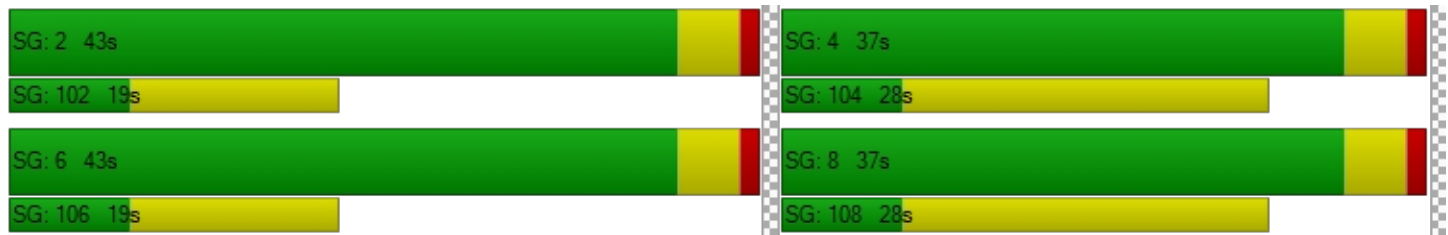
X, volume / capacity	0.18	0.54	0.54	0.08	0.70	0.71	0.63	0.02	0.52	0.05
d, Delay for Lane Group [s/veh]	25.09	12.16	12.21	16.52	15.62	16.27	31.15	19.39	24.12	19.52
Lane Group LOS	C	B	B	B	B	B	C	B	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.60	5.93	5.88	0.27	9.22	9.23	3.52	0.15	3.82	0.28
50th-Percentile Queue Length [ft]	14.91	148.13	147.07	6.87	230.60	230.85	87.91	3.74	95.62	6.90
95th-Percentile Queue Length [veh]	1.07	9.92	9.86	0.49	14.20	14.22	6.33	0.27	6.88	0.50
95th-Percentile Queue Length [ft]	26.83	247.94	246.52	12.37	355.12	355.44	158.25	6.73	172.11	12.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.09	12.18	12.21	16.52	15.91	16.27	31.15	31.15	19.39	24.12	24.12	19.52
Movement LOS	C	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.55			15.95			30.44			23.75		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.664											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1200	120	60	1424	180	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1200	120	60	1424	180	70
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	318	32	16	377	47	18
Total Analysis Volume [veh/h]	1272	127	64	1507	190	74
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	69	69	12	12
g / C, Green / Cycle	0.76	0.76	0.76	0.76	0.14	0.14
(v / s)_j Volume / Saturation Flow Rate	0.38	0.39	0.17	0.42	0.11	0.05
s, saturation flow rate [veh/h]	1863	1794	384	3547	1773	1557
c, Capacity [veh/h]	1420	1367	301	2704	240	211
d1, Uniform Delay [s]	4.06	4.16	9.68	4.41	37.62	35.27
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.22	1.37	1.60	0.83	5.82	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.49	0.51	0.21	0.56	0.79	0.35
d, Delay for Lane Group [s/veh]	5.29	5.53	11.28	5.25	43.44	36.27
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.64	3.76	0.72	4.31	4.32	1.49
50th-Percentile Queue Length [ft]	91.10	93.92	18.12	107.70	108.06	37.37
95th-Percentile Queue Length [veh]	6.56	6.76	1.30	7.71	7.73	2.69
95th-Percentile Queue Length [ft]	163.98	169.05	32.62	192.80	193.29	67.27

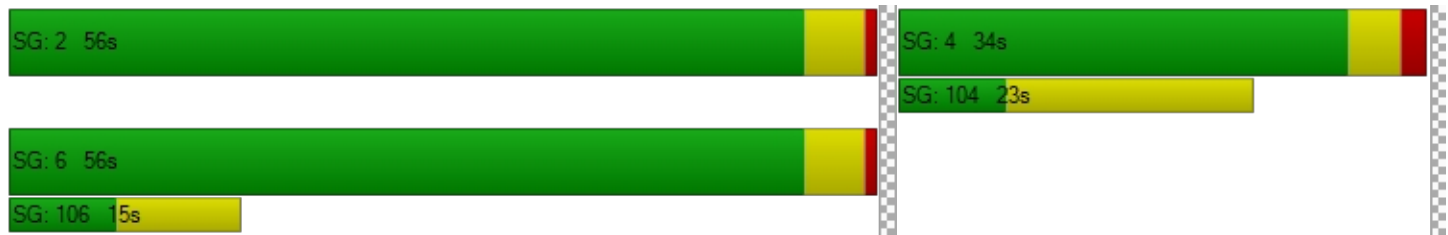


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.40	5.53	11.28	5.25	43.44	36.27
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	5.41		5.49		41.43	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.39					
Intersection LOS	A					
Intersection V/C	0.532					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	814	97	70	1436	100	139	290	50	30	200	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	814	97	70	1436	100	139	290	50	30	200	40
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	221	26	19	399	28	39	82	14	8	56	11
Total Analysis Volume [veh/h]	22	885	105	78	1596	111	157	328	57	34	225	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	27	24	24
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.27	0.14	0.45	0.46	0.36	0.18
s, saturation flow rate [veh/h]	291	1900	1812	577	1900	1838	1487	1683
c, Capacity [veh/h]	120	856	816	248	856	828	666	733
d1, Uniform Delay [s]	29.92	12.29	12.34	20.98	16.44	16.44	17.28	13.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	2.97	3.18	3.29	30.87	38.35	7.30	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

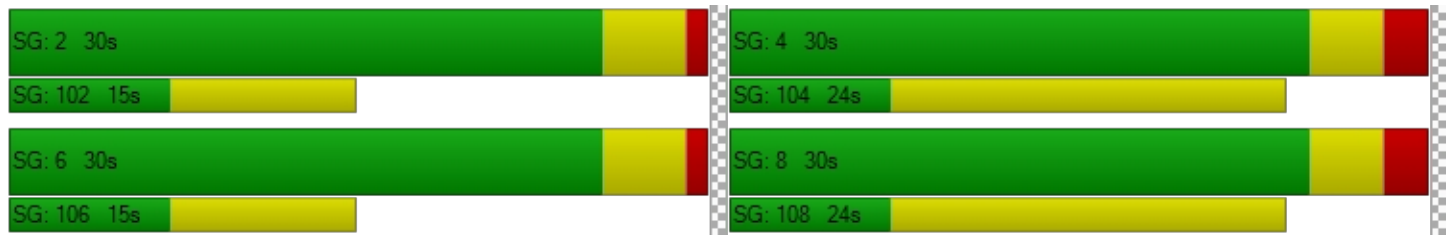
X, volume / capacity	0.18	0.59	0.60	0.31	1.00	1.03	0.81	0.41
d, Delay for Lane Group [s/veh]	33.23	15.26	15.52	24.28	47.30	54.78	24.57	13.24
Lane Group LOS	C	B	B	C	F	F	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.41	5.00	4.88	1.14	17.10	18.26	7.35	2.56
50th-Percentile Queue Length [ft]	10.34	125.11	121.97	28.39	427.47	456.53	183.70	63.97
95th-Percentile Queue Length [veh]	0.74	8.67	8.50	2.04	23.89	25.77	11.79	4.61
95th-Percentile Queue Length [ft]	18.61	216.82	212.53	51.11	597.20	644.20	294.84	115.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.23	15.37	15.52	24.28	50.77	54.78	24.57	24.57	24.57	13.24	13.24	13.24
Movement LOS	C	B	B	C	D	D	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	15.78			49.86			24.57			13.24		
Approach LOS	B			D			C			B		
d_I, Intersection Delay [s/veh]	33.58											
Intersection LOS	C											
Intersection V/C	0.827											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	179	120	30	224	20	70	439	50	10	367	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	179	120	30	224	20	70	439	50	10	367	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	52	35	9	67	6	21	131	15	3	99	5
Total Analysis Volume [veh/h]	23	208	140	36	268	24	83	522	59	11	394	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	18	33	33
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.04	0.14	0.02	0.38	0.23
s, saturation flow rate [veh/h]	1125	1706	1026	1863	1530	1730	1861
c, Capacity [veh/h]	273	503	194	549	451	1023	1089
d1, Uniform Delay [s]	22.89	18.76	26.77	17.44	15.17	9.43	7.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	1.72	0.46	0.67	0.05	3.19	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.69	0.19	0.49	0.05	0.65	0.39
d, Delay for Lane Group [s/veh]	23.02	20.48	27.22	18.11	15.22	12.62	8.85
Lane Group LOS	C	C	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.28	4.03	0.49	2.89	0.22	5.38	2.71
50th-Percentile Queue Length [ft]	6.89	100.74	12.37	72.17	5.57	134.40	67.72
95th-Percentile Queue Length [veh]	0.50	7.25	0.89	5.20	0.40	9.18	4.88
95th-Percentile Queue Length [ft]	12.41	181.32	22.26	129.91	10.03	229.46	121.90

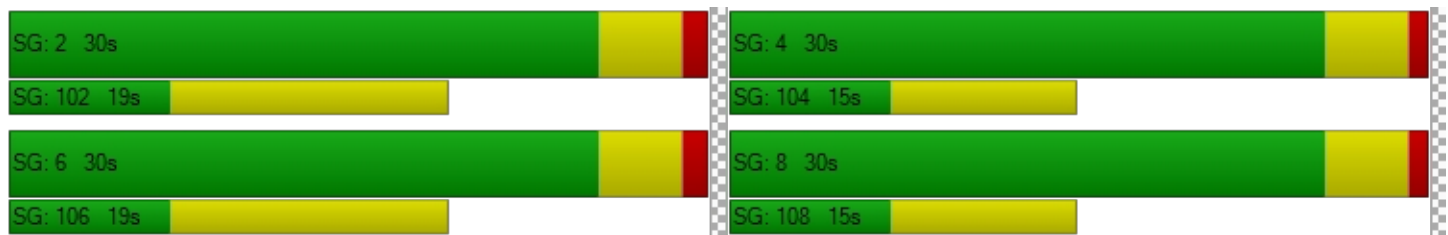


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.02	20.48	20.48	27.22	18.11	15.22	12.62	12.62	12.62	8.85	8.85	8.85
Movement LOS	C	C	C	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	20.63			18.90			12.62			8.85		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	14.53											
Intersection LOS	B											
Intersection V/C	0.588											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	771	0	180	0	0	0	0	989	327	140	1483	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	771	0	180	0	0	0	0	989	327	140	1483	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	0	47	0	0	0	0	271	90	40	425	0
Total Analysis Volume [veh/h]	806	0	188	0	0	0	0	1083	358	160	1699	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	0	66	66	110	66	66	66
g / C, Green / Cycle	0.33	0.33	0.00	0.55	0.55	0.92	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.28	0.29	0.00	0.00	0.21	0.22	0.30	0.31	0.31
s, saturation flow rate [veh/h]	1810	1696	1863	288	5176	1595	529	3618	1900
c, Capacity [veh/h]	590	553	7	157	2870	1461	280	2006	1054
d1, Uniform Delay [s]	37.63	38.30	0.00	0.00	15.03	0.55	29.24	17.18	17.18
k, delay calibration	0.17	0.19	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	8.50	0.00	0.00	0.38	0.09	8.18	1.11	2.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

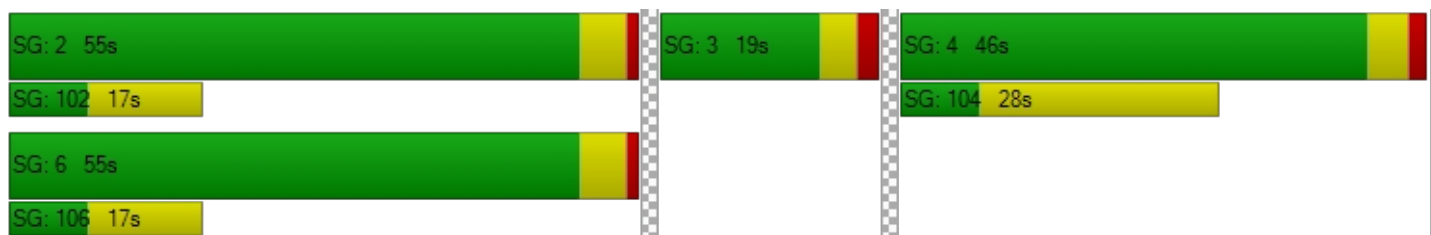
X, volume / capacity	0.85	0.89	0.00	0.00	0.38	0.25	0.57	0.56	0.56
d, Delay for Lane Group [s/veh]	43.05	46.80	0.00	0.00	15.41	0.63	37.41	18.29	19.29
Lane Group LOS	D	D	A	A	B	A	D	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	14.46	14.85	0.00	0.00	5.46	0.04	4.38	9.75	10.53
50th-Percentile Queue Length [ft]	361.49	371.22	0.00	0.00	136.40	0.88	109.53	243.77	263.35
95th-Percentile Queue Length [veh]	20.70	21.17	0.00	0.00	9.29	0.06	7.81	14.87	15.86
95th-Percentile Queue Length [ft]	517.40	529.21	0.00	0.00	232.17	1.58	195.34	371.79	396.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.47	46.80	46.80	0.00	0.00	0.00	0.00	15.41	0.63	37.41	18.63	19.29
Movement LOS	D	D	D	A	A	A	A	B	A	D	B	B
d_A, Approach Delay [s/veh]	44.91			0.00			11.74			20.25		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	23.10											
Intersection LOS	C											
Intersection V/C	0.598											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	18.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	177	113	40	165	43	72	131	50	21	215	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	177	113	40	165	43	72	131	50	21	215	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	55	35	11	47	12	20	37	14	6	59	8
Total Analysis Volume [veh/h]	12	219	140	46	189	49	82	149	57	23	235	33
Pedestrian Volume [ped/h]	17			9			15			28		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	558	529	525	525
Degree of Utilization, x	0.67	0.54	0.55	0.55

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	4.93	3.16	3.28	3.35
95th-Percentile Queue Length [ft]	123.24	79.06	82.10	83.74
Approach Delay [s/veh]	21.38	17.47	17.88	18.06
Approach LOS	C	C	C	C
Intersection Delay [s/veh]	18.88			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST) / MONTANA AVENUE \ (102)**

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.377

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	664	517	49	93	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	664	517	49	93	20
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	200	143	14	28	6
Total Analysis Volume [veh/h]	12	800	571	54	112	24
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	11	11	11	4
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.18
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.30	0.03	0.08
s, saturation flow rate [veh/h]	848	3618	1900	1576	1772
c, Capacity [veh/h]	401	1583	831	690	319
d1, Uniform Delay [s]	9.45	4.88	5.44	3.94	8.76
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.38	0.02	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

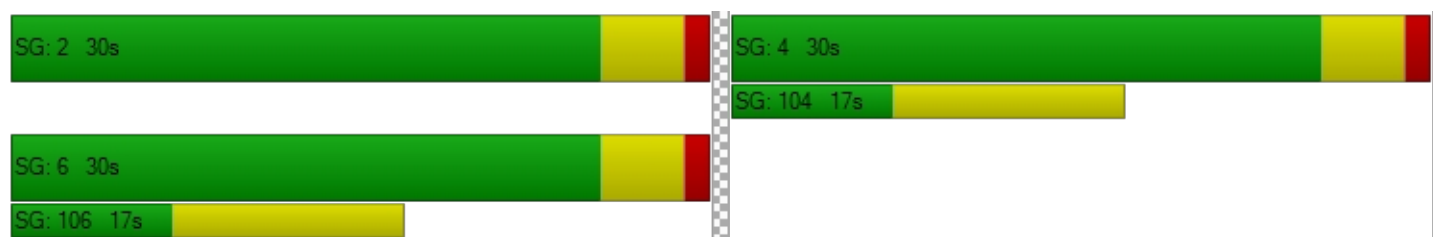
X, volume / capacity	0.03	0.51	0.69	0.08	0.43
d, Delay for Lane Group [s/veh]	9.46	4.98	5.82	3.96	9.10
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.46	0.78	0.05	0.45
50th-Percentile Queue Length [ft]	0.94	11.45	19.58	1.28	11.20
95th-Percentile Queue Length [veh]	0.07	0.82	1.41	0.09	0.81
95th-Percentile Queue Length [ft]	1.69	20.61	35.25	2.30	20.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.46	4.98	5.82	3.96	9.10	9.10
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.04		5.66		9.10	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.64					
Intersection LOS	A					
Intersection V/C	0.377					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	300	3	3	412	184	161	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1201	10	10	1647	734	643	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		61	61	61	61	61	61	20	20
g / C, Green / Cycle		0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate		0.16	0.32	0.32	0.02	0.46	0.45	0.18	0.04
s, saturation flow rate [veh/h]		308	1900	1894	459	3618	1615	3514	1617
c, Capacity [veh/h]		194	1282	1279	305	2442	1090	782	360
d1, Uniform Delay [s]		21.23	6.97	6.97	11.95	8.71	8.70	33.22	28.41
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.03	1.25	1.26	0.20	1.51	3.33	2.23	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.25	0.47	0.47	0.03	0.67	0.67	0.82	0.20
d, Delay for Lane Group [s/veh]		24.26	8.22	8.23	12.15	10.23	12.03	35.45	28.68
Lane Group LOS		C	A	A	B	B	B	D	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		0.97	6.31	6.29	0.12	8.09	7.75	6.66	1.26
50th-Percentile Queue Length [ft]		24.30	157.63	157.26	2.88	202.19	193.74	166.43	31.39
95th-Percentile Queue Length [veh]		1.75	10.42	10.40	0.21	12.75	12.32	10.89	2.26
95th-Percentile Queue Length [ft]		43.75	260.58	260.09	5.19	318.78	307.88	272.22	56.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.26	8.23	8.23	12.15	10.23	12.03	35.45	28.68	28.68
Movement LOS				C	A	A	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	0.00			8.84			10.79			34.77		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.15											
Intersection LOS	B											
Intersection V/C	0.638											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	93.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

**Intersection Setup**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	631	330	420	0	510	347	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	631	330	420	0	510	347	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	171	89	113	0	137	92	0	21
Total Analysis Volume [veh/h]	0	0	0	0	683	357	453	0	550	370	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.38	0.22	0.25	0.29	0.19	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.42	37.79	12.23	23.68	20.13
k, delay calibration		0.50	0.41	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		73.80	1.07	268.55	1.79	3.37	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

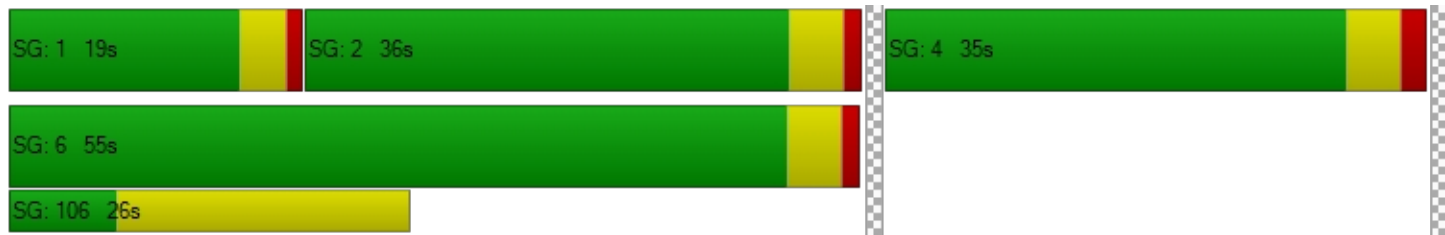
X, volume / capacity		1.12	0.40	1.56	0.52	0.56	0.15
d, Delay for Lane Group [s/veh]		103.63	12.50	306.35	14.02	27.05	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		25.52	4.25	27.91	6.81	6.77	1.29
50th-Percentile Queue Length [ft]		638.03	106.17	697.78	170.19	169.36	32.26
95th-Percentile Queue Length [veh]		36.36	7.63	43.52	11.09	11.04	2.32
95th-Percentile Queue Length [ft]		909.08	190.66	1088.09	277.16	276.07	58.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	103.63	12.50	306.35	0.00	14.02	27.05	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			72.35			146.05			25.86		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	93.47											
Intersection LOS	F											
Intersection V/C	0.823											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	99	130	100	140	170	10	70	963	80	0	870	134
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	130	100	140	170	10	70	963	80	0	870	134
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	37	28	44	54	3	18	254	21	0	233	36
Total Analysis Volume [veh/h]	111	146	113	176	214	13	74	1016	84	0	932	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	54	54	54	54	54
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.60	0.60	0.60	0.60	0.60
(v / s)_j Volume / Saturation Flow Rate	0.11	0.09	0.08	0.16	0.14	0.16	0.23	0.23	0.32	0.34
s, saturation flow rate [veh/h]	1025	1676	1335	1083	1656	469	3192	1594	1676	1578
c, Capacity [veh/h]	240	495	394	298	489	259	1923	960	1010	951
d1, Uniform Delay [s]	35.91	24.48	24.41	34.25	25.90	20.40	9.22	9.26	10.47	10.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.38	0.33	0.40	1.86	0.69	2.75	0.57	1.17	2.01	2.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.46	0.29	0.29	0.59	0.46	0.29	0.38	0.38	0.53	0.57
d, Delay for Lane Group [s/veh]	37.30	24.81	24.81	36.11	26.58	23.14	9.79	10.42	12.48	13.23
Lane Group LOS	D	C	C	D	C	C	A	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.36	2.40	1.86	3.74	3.97	1.30	3.49	3.70	6.15	6.40
50th-Percentile Queue Length [ft]	58.97	60.04	46.56	93.57	99.24	32.54	87.33	92.57	153.78	159.98
95th-Percentile Queue Length [veh]	4.25	4.32	3.35	6.74	7.14	2.34	6.29	6.67	10.22	10.55
95th-Percentile Queue Length [ft]	106.15	108.08	83.81	168.42	178.62	58.57	157.20	166.63	255.47	263.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.30	24.81	24.81	36.11	26.58	26.58	23.14	9.97	10.42	0.00	12.80	13.23
Movement LOS	D	C	C	D	C	C	C	A	B		B	B
d_A, Approach Delay [s/veh]	28.55			30.74			10.83			12.85		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.38											
Intersection LOS	B											
Intersection V/C	0.503											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	900	80	139	1004	90	160	720	131	110	790	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	900	80	139	1004	90	160	720	131	110	790	90
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	233	21	37	267	24	42	189	34	29	211	24
Total Analysis Volume [veh/h]	41	932	83	148	1070	96	168	756	138	118	845	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	43	33	33	43	36	36	38	28	28	38	26	26
g / C, Green / Cycle	0.48	0.37	0.37	0.48	0.40	0.40	0.42	0.31	0.31	0.42	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.06	0.26	0.06	0.18	0.30	0.07	0.19	0.24	0.25	0.14	0.25	0.26
s, saturation flow rate [veh/h]	679	3547	1502	817	3547	1448	893	1900	1758	854	1900	1804
c, Capacity [veh/h]	304	1305	553	374	1413	577	348	592	547	336	550	523
d1, Uniform Delay [s]	16.22	24.42	19.05	16.71	23.36	17.47	20.75	28.18	28.39	19.46	30.39	30.56
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.22	0.23	0.11	0.26	0.27
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	3.36	0.57	3.12	3.84	0.62	4.72	4.44	5.56	0.63	9.83	11.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

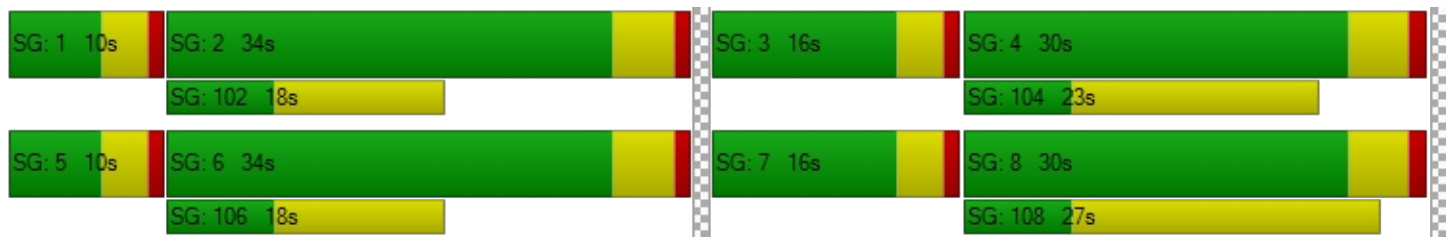
X, volume / capacity	0.13	0.71	0.15	0.40	0.76	0.17	0.48	0.78	0.79	0.35	0.87	0.88
d, Delay for Lane Group [s/veh]	16.42	27.78	19.63	19.84	27.20	18.09	25.46	32.61	33.96	20.08	40.22	42.22
Lane Group LOS	B	C	B	B	C	B	C	C	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.45	8.77	1.22	1.98	10.06	1.35	2.60	9.28	9.01	1.55	11.04	10.94
50th-Percentile Queue Length [ft]	11.16	219.27	30.57	49.43	251.45	33.71	65.05	231.90	225.14	38.72	275.95	273.59
95th-Percentile Queue Length [veh]	0.80	13.63	2.20	3.56	15.26	2.43	4.68	14.27	13.93	2.79	16.49	16.37
95th-Percentile Queue Length [ft]	20.09	340.69	55.02	88.97	381.48	60.67	117.10	356.77	348.18	69.70	412.17	409.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.42	27.78	19.63	19.84	27.20	18.09	25.46	33.14	33.96	20.08	41.09	42.22
Movement LOS	B	C	B	B	C	B	C	C	C	C	D	D
d_A, Approach Delay [s/veh]	26.70			25.71			32.03			38.85		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	30.53											
Intersection LOS	C											
Intersection V/C	0.637											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	51	759	155	0	1062	80	82	900	70	60	760	102
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	759	155	0	1062	80	82	900	70	60	760	102
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	192	39	0	287	22	21	235	18	16	205	28
Total Analysis Volume [veh/h]	52	769	157	0	1149	87	86	939	73	65	822	110
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	47	47	47	47	47	47
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.52	0.52	0.52	0.52	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.11	0.26	0.26	0.23	0.23	0.14	0.26	0.05	0.11	0.25	0.26
s, saturation flow rate [veh/h]	454	1863	1721	3547	1754	606	3618	1524	593	1900	1780
c, Capacity [veh/h]	154	699	645	1330	658	282	1891	796	276	993	931
d1, Uniform Delay [s]	35.52	23.62	23.78	22.90	22.97	23.33	13.84	10.77	22.68	13.67	13.78
k, delay calibration	0.11	0.14	0.15	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	1.54	1.87	0.47	0.99	2.78	0.93	0.23	2.00	1.65	1.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.68	0.70	0.62	0.63	0.31	0.50	0.09	0.24	0.48	0.49
d, Delay for Lane Group [s/veh]	36.79	25.16	25.65	23.37	23.96	26.12	14.78	10.99	24.68	15.33	15.63
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.11	8.47	8.08	6.93	7.05	1.60	5.98	0.74	1.15	6.05	5.88
50th-Percentile Queue Length [ft]	27.83	211.73	202.08	173.25	176.13	39.98	149.41	18.58	28.70	151.20	147.09
95th-Percentile Queue Length [veh]	2.00	13.24	12.75	11.25	11.40	2.88	9.99	1.34	2.07	10.08	9.86
95th-Percentile Queue Length [ft]	50.09	331.05	318.65	281.18	284.96	71.96	249.64	33.45	51.66	252.03	246.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.79	25.35	25.65	0.00	23.54	23.96	26.12	14.78	10.99	24.68	15.45	15.63
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	26.00			23.57			15.41			16.07		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.31											
Intersection LOS	C											
Intersection V/C	0.521											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	55.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration	↑↑↑↑			↑↑↑↑			↑↑↑			↑↑↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	112	758	110	190	1192	300	178	952	160	280	817	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	758	110	190	1192	300	178	952	160	280	817	123
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	205	30	52	329	83	45	243	41	73	213	32
Total Analysis Volume [veh/h]	121	822	119	209	1314	331	182	973	163	293	854	129
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	42	59	10	43	60	12	37	52	12	37	37
g / C, Green / Cycle	0.08	0.35	0.49	0.09	0.36	0.50	0.10	0.31	0.43	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.07	0.16	0.08	0.06	0.26	0.22	0.10	0.27	0.11	0.17	0.24	0.09
s, saturation flow rate [veh/h]	1810	5074	1574	3445	5074	1520	1810	3618	1429	1774	3618	1515
c, Capacity [veh/h]	141	1775	781	300	1823	769	187	1109	624	184	1109	464
d1, Uniform Delay [s]	54.77	30.30	16.47	53.31	33.29	18.75	53.69	39.52	21.51	53.86	37.82	31.58
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.25	0.20	0.33	0.50	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.01	0.87	0.41	2.92	2.50	1.76	40.42	4.35	0.66	292.46	2.46	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.46	0.15	0.70	0.72	0.43	0.97	0.88	0.26	1.60	0.77	0.28
d, Delay for Lane Group [s/veh]	68.78	31.18	16.88	56.22	35.79	20.50	94.11	43.87	22.17	346.32	40.28	32.27
Lane Group LOS	E	C	B	E	D	C	F	D	C	F	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.13	6.21	1.85	3.19	11.34	6.12	7.52	13.99	3.00	20.40	11.57	2.91
50th-Percentile Queue Length [ft]	103.36	155.36	46.25	79.73	283.57	153.09	188.10	349.83	75.00	509.90	289.23	72.80
95th-Percentile Queue Length [veh]	7.44	10.30	3.33	5.74	16.87	10.18	12.02	20.13	5.40	32.34	17.15	5.24
95th-Percentile Queue Length [ft]	186.05	257.57	83.26	143.52	421.65	254.55	300.56	503.20	135.01	808.57	428.69	131.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	68.78	31.18	16.88	56.22	35.79	20.50	94.11	43.87	22.17	346.32	40.28	32.27
Movement LOS	E	C	B	E	D	C	F	D	C	F	D	C
d_A, Approach Delay [s/veh]	33.86			35.36			48.12			109.74		
Approach LOS	C			D			D			F		
d_I, Intersection Delay [s/veh]	55.35											
Intersection LOS	E											
Intersection V/C	0.760											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	1010	520	567	1046
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1010	520	567	1046
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	260	134	155	285
Total Analysis Volume [veh/h]	0	0	1039	535	619	1142
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	42	42	39	85
g / C, Green / Cycle	0.47	0.47	0.43	0.95
(v / s)_i Volume / Saturation Flow Rate	0.33	0.38	0.39	0.36
s, saturation flow rate [veh/h]	3192	1422	1597	3192
c, Capacity [veh/h]	1493	665	687	3025
d1, Uniform Delay [s]	18.89	20.43	23.85	0.19
k, delay calibration	0.50	0.50	0.24	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.71	10.00	9.34	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.70	0.80	0.90	0.38
d, Delay for Lane Group [s/veh]	21.60	30.43	33.19	0.55
Lane Group LOS	C	C	C	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	8.58	10.78	13.04	0.15
50th-Percentile Queue Length [ft]	214.49	269.43	326.04	3.79
95th-Percentile Queue Length [veh]	13.38	16.16	18.96	0.27
95th-Percentile Queue Length [ft]	334.59	404.03	474.11	6.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	21.60	30.43	33.19	0.55
Movement LOS			C	C	C	A
d_A, Approach Delay [s/veh]	0.00		24.60		12.03	
Approach LOS	A		C		B	
d_I, Intersection Delay [s/veh]	17.96					
Intersection LOS	B					
Intersection V/C	0.764					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	49.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.827

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	30	1401	30	283	1174	60	150	370	123	210	270	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1401	30	283	1174	60	150	370	123	210	270	70
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	380	8	79	326	17	42	105	35	56	72	19
Total Analysis Volume [veh/h]	33	1518	33	314	1304	67	170	419	139	223	287	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	78	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.52	0.52	0.52	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.09	0.48	0.02	0.61	0.41	0.05	0.19	0.13	0.10	0.26	0.11	0.12
s, saturation flow rate [veh/h]	378	3192	1425	511	3192	1384	886	3192	1352	860	1676	1439
c, Capacity [veh/h]	145	1667	744	260	2030	880	219	966	409	207	508	436
d1, Uniform Delay [s]	45.46	32.60	17.50	55.84	16.80	10.44	60.36	41.94	40.60	64.34	40.98	41.47
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.11	0.11	0.36	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.63	8.97	0.11	123.30	1.58	0.17	9.99	0.31	0.49	75.98	0.44	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.91	0.04	1.21	0.64	0.08	0.78	0.43	0.34	1.08	0.37	0.40
d, Delay for Lane Group [s/veh]	49.09	41.58	17.62	179.14	18.38	10.61	70.35	42.24	41.09	140.32	41.42	42.07
Lane Group LOS	D	D	B	F	B	B	E	D	D	F	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.16	26.69	0.60	12.80	13.98	0.91	7.07	6.35	4.11	12.37	5.53	5.28
50th-Percentile Queue Length [ft]	29.05	667.18	14.94	320.07	349.54	22.65	176.76	158.73	102.70	309.24	138.36	132.10
95th-Percentile Queue Length [veh]	2.09	35.16	1.08	21.19	20.11	1.63	11.43	10.48	7.39	18.96	9.39	9.05
95th-Percentile Queue Length [ft]	52.28	878.98	26.89	529.75	502.84	40.76	285.78	262.05	184.86	474.11	234.81	226.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.09	41.58	17.62	179.14	18.38	10.61	70.35	42.24	41.09	140.32	41.65	42.07
Movement LOS	D	D	B	F	B	B	E	D	D	F	D	D
d_A, Approach Delay [s/veh]	41.23			48.03			48.59			79.38		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	49.76											
Intersection LOS	D											
Intersection V/C	0.827											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	93	986	50	120	1217	40	60	550	90	110	500	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	986	50	120	1217	40	60	550	90	110	500	93
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	251	13	32	327	11	15	141	23	28	127	24
Total Analysis Volume [veh/h]	95	1003	51	129	1308	43	62	565	92	112	510	95
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	50	50	50	50	50
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.26	0.22	0.22	0.27	0.28	0.28	0.08	0.34	0.07	0.15	0.37
s, saturation flow rate [veh/h]	362	3192	1631	480	3192	1646	730	1676	1402	758	1627
c, Capacity [veh/h]	148	1474	753	203	1474	760	155	762	638	192	740
d1, Uniform Delay [s]	44.15	20.38	20.40	38.32	22.10	22.12	46.29	24.68	17.51	44.74	26.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.18	0.04	0.04	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.54	1.09	2.14	14.27	1.85	3.56	0.62	2.42	0.04	1.04	5.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.47	0.47	0.64	0.60	0.61	0.40	0.74	0.14	0.58	0.82
d, Delay for Lane Group [s/veh]	63.69	21.47	22.54	52.59	23.95	25.68	46.91	27.10	17.55	45.78	31.09
Lane Group LOS	E	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	3.43	6.26	6.65	4.14	8.75	9.41	1.65	12.27	1.37	3.02	14.32
50th-Percentile Queue Length [ft]	85.78	156.48	166.13	103.49	218.65	235.13	41.23	306.76	34.13	75.55	358.12
95th-Percentile Queue Length [veh]	6.18	10.36	10.87	7.45	13.60	14.43	2.97	18.02	2.46	5.44	20.53
95th-Percentile Queue Length [ft]	154.40	259.05	271.82	186.29	339.91	360.87	74.21	450.38	61.43	136.00	513.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	63.69	21.80	22.54	52.59	24.50	25.68	46.91	27.10	17.55	45.78	31.09	31.09
Movement LOS	E	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	25.30			26.98			27.58			33.38		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.74											
Intersection LOS	C											
Intersection V/C	0.651											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	102.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.876

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⏏⏏⏏			⏏⏏			⏏⏏			⏏⏏⏏		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	350	320	70	620	60	660	1520	170	30	686	340
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	350	320	70	620	60	660	1520	170	30	686	340
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	100	91	21	189	18	176	405	45	8	192	95
Total Analysis Volume [veh/h]	46	399	365	85	754	73	703	1620	181	34	767	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	54	44	64	54	34	34	57	49	49	57	37	57
g / C, Green / Cycle	0.45	0.37	0.54	0.45	0.28	0.28	0.47	0.41	0.41	0.47	0.31	0.47
(v / s)_j Volume / Saturation Flow Rate	0.05	0.13	0.23	0.08	0.26	0.26	0.66	0.47	0.49	0.08	0.21	0.24
s, saturation flow rate [veh/h]	972	3080	1574	1062	1618	1562	1061	1900	1827	408	3618	1580
c, Capacity [veh/h]	354	1139	852	469	461	445	458	777	748	176	1104	753
d1, Uniform Delay [s]	23.51	27.40	16.43	20.52	41.50	41.55	39.45	35.50	35.50	28.21	36.81	21.65
k, delay calibration	0.11	0.11	0.50	0.11	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.18	1.57	0.18	19.69	20.78	251.19	85.40	104.50	2.44	3.62	2.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

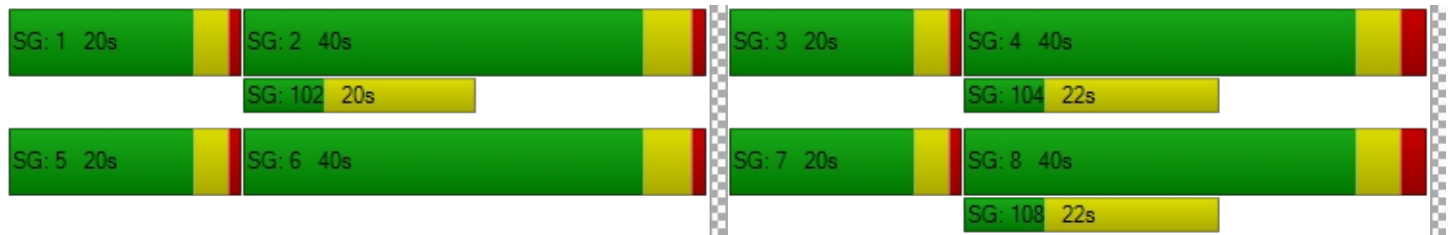
X, volume / capacity	0.13	0.35	0.43	0.18	0.91	0.91	1.53	1.16	1.20	0.19	0.69	0.50
d, Delay for Lane Group [s/veh]	23.68	27.58	18.01	20.70	61.18	62.34	290.64	120.90	140.00	30.65	40.43	24.06
Lane Group LOS	C	C	B	C	E	E	F	F	F	C	D	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.75	4.13	6.15	1.44	14.41	14.12	40.85	39.95	42.39	0.63	10.32	7.68
50th-Percentile Queue Length [ft]	18.82	103.24	153.82	36.07	360.34	352.88	1021.28	998.80	1059.74	15.71	257.97	191.93
95th-Percentile Queue Length [veh]	1.36	7.43	10.22	2.60	20.64	20.28	65.47	55.78	60.23	1.13	15.59	12.22
95th-Percentile Queue Length [ft]	33.88	185.82	255.51	64.93	516.00	506.92	1636.86	1394.43	1505.71	28.29	389.68	305.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.68	27.58	18.01	20.70	61.69	62.34	290.64	129.38	140.00	30.65	40.43	24.06
Movement LOS	C	C	B	C	E	E	F	F	F	C	D	C
d_A, Approach Delay [s/veh]	23.05			57.92			175.42			34.88		
Approach LOS	C			E			F			C		
d_I, Intersection Delay [s/veh]	102.08											
Intersection LOS	F											
Intersection V/C	0.876											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	80	82	50	90	60	70	851	20	20	769	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	80	82	50	90	60	70	851	20	20	769	20
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	24	24	14	26	17	19	235	6	5	205	5
Total Analysis Volume [veh/h]	35	94	97	57	103	69	77	938	22	21	819	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	61	61	61	61
g / C, Green / Cycle	0.22	0.22	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.17	0.20	0.37	0.37	0.28	0.28
s, saturation flow rate [veh/h]	1332	1171	1315	1512	1598	1508
c, Capacity [veh/h]	333	302	944	1031	1132	1028
d1, Uniform Delay [s]	32.80	33.88	6.52	7.18	6.18	6.29
k, delay calibration	0.11	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.41	4.94	1.98	2.01	1.02	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.68	0.76	0.51	0.54	0.39	0.41
d, Delay for Lane Group [s/veh]	35.21	38.82	8.49	9.20	7.19	7.49
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.73	5.20	3.79	4.82	3.23	3.15
50th-Percentile Queue Length [ft]	118.24	130.01	94.84	120.52	80.75	78.63
95th-Percentile Queue Length [veh]	8.30	8.94	6.83	8.42	5.81	5.66
95th-Percentile Queue Length [ft]	207.41	223.51	170.70	210.54	145.35	141.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.21	35.21	35.21	38.82	38.82	38.82	8.49	8.89	9.20	7.19	7.34	7.49
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.21			38.82			8.87			7.34		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	13.75											
Intersection LOS	B											
Intersection V/C	0.563											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.091

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	594	511	0	16	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	594	511	0	16	42
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	156	141	0	5	12
Total Analysis Volume [veh/h]	0	626	562	0	18	48
Pedestrian Volume [ped/h]	6		5		22	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.09	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	25.11	13.00
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.30	0.32
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	7.44	7.96
d_A, Approach Delay [s/veh]	0.00		0.00		16.31	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.86					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	8	601	528	16	13	28
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	601	528	16	13	28
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	162	146	4	6	13
Total Analysis Volume [veh/h]	8	646	583	16	25	53
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.83	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.64	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.11		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.450

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	293	10	10	222	30	10	0	0	10	10	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	293	10	10	222	30	10	0	0	10	10	11
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	83	3	3	58	8	10	0	0	3	3	4
Total Analysis Volume [veh/h]	23	332	11	10	233	31	40	0	0	14	14	15
Pedestrian Volume [ped/h]	33			30			12			7		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	813	805	642	685
Degree of Utilization, x	0.45	0.34	0.06	0.06

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.36	1.51	0.20	0.20
95th-Percentile Queue Length [ft]	58.98	37.84	4.97	5.01
Approach Delay [s/veh]	11.01	9.76	8.98	8.61
Approach LOS	B	A	A	A
Intersection Delay [s/veh]	10.28			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	11.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	21	280	0	10	237	30	10	10	10	20	0	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	280	0	10	237	30	10	10	10	20	0	31
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	87	0	3	63	8	7	7	7	8	0	12
Total Analysis Volume [veh/h]	26	349	0	11	251	32	29	29	29	31	0	48
Pedestrian Volume [ped/h]	8			11			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	757	752	652	669
Degree of Utilization, x	0.50	0.39	0.13	0.12

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.79	1.87	0.46	0.40
95th-Percentile Queue Length [ft]	69.68	46.63	11.46	9.99
Approach Delay [s/veh]	12.35	10.83	9.36	9.10
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	11.19			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	16	0	8	3	5	232	20	35	351	10
Total Analysis Volume [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	87	87	96	89	89
g / C, Green / Cycle	0.12	0.12	0.12	0.12	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_j Volume / Saturation Flow Rate	0.03	0.04	0.00	0.02	0.05	0.27	0.27	0.21	0.39	0.39
s, saturation flow rate [veh/h]	1310	1479	1339	1732	445	1870	1807	656	1870	1847
c, Capacity [veh/h]	165	178	144	209	387	1352	1307	558	1390	1373
d1, Uniform Delay [s]	52.14	48.46	0.00	47.58	4.03	6.32	6.34	3.39	6.44	6.46
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.44	0.00	0.18	0.27	0.80	0.84	1.07	1.39	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.35	0.00	0.21	0.05	0.38	0.38	0.25	0.52	0.52
d, Delay for Lane Group [s/veh]	52.37	48.91	0.00	47.76	4.29	7.13	7.18	4.45	7.83	7.89
Lane Group LOS	D	D	A	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.98	1.76	0.00	1.18	0.11	4.76	4.65	0.72	7.24	7.23
50th-Percentile Queue Length [ft]	24.49	44.00	0.00	29.38	2.68	118.93	116.29	18.08	180.89	180.72
95th-Percentile Queue Length [veh]	1.76	3.17	0.00	2.12	0.19	8.33	8.19	1.30	11.65	11.64
95th-Percentile Queue Length [ft]	44.09	79.20	0.00	52.88	4.83	208.36	204.72	32.55	291.18	290.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.37	48.91	48.91	0.00	47.76	47.76	4.29	7.15	7.18	4.45	7.86	7.89
Movement LOS	D	D	D	A	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	50.12			47.76			7.09			7.56		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.52											
Intersection LOS	A											
Intersection V/C	0.435											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	227.36	471.56	588.57	567.55
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.212	2.010	2.845	2.815
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.720	1.631	2.407	2.864
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.148

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	23	50	0	820	542	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	50	0	820	542	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	13	0	205	136	0
Total Analysis Volume [veh/h]	23	50	0	820	542	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.15	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	32.11	12.72	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh]	0.50	0.32	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	12.62	8.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.83		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.96					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	38	0	0	0	4	222	20	59	356	12
Total Analysis Volume [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	14	14		96	85	85	96	89	89
g / C, Green / Cycle	0.12	0.12		0.80	0.71	0.71	0.80	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10		0.03	0.26	0.26	0.33	0.39	0.40
s, saturation flow rate [veh/h]	1691	1478		440	1870	1803	701	1870	1844
c, Capacity [veh/h]	201	176		379	1322	1275	588	1388	1369
d1, Uniform Delay [s]	48.02	51.88		4.34	6.99	7.01	3.91	6.58	6.62
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	4.85		0.20	0.80	0.84	2.01	1.46	1.51
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.86		0.04	0.37	0.37	0.40	0.53	0.54
d, Delay for Lane Group [s/veh]	48.27	56.73		4.54	7.79	7.85	5.92	8.04	8.13
Lane Group LOS	D	E		A	A	A	A	A	A
Critical Lane Group	No	Yes		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.43	4.72		0.08	4.88	4.76	1.31	7.50	7.52
50th-Percentile Queue Length [ft]	35.85	118.05		1.89	121.93	119.02	32.70	187.53	188.00
95th-Percentile Queue Length [veh]	2.58	8.29		0.14	8.50	8.34	2.35	11.99	12.02
95th-Percentile Queue Length [ft]	64.54	207.14		3.40	212.48	208.48	58.86	299.83	300.43



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	48.27	56.73	56.73	0.00	0.00	0.00	4.54	7.82	7.85	5.92	8.09	8.13
Movement LOS	D	E	E				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	54.58			0.00			7.77			7.79		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	11.08											
Intersection LOS	B											
Intersection V/C	0.503											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	103.44	386.92	79.30
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.363	1.514	2.794	2.849
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.896	4.132	2.371	2.967
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	3	1	2	611	549	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	2	611	549	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	153	137	1
Total Analysis Volume [veh/h]	3	1	2	611	549	5
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	22.85	12.05	8.61	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.04	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	1.11	0.15	0.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.15		0.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	16	0	8	3	5	232	20	35	351	10
Total Analysis Volume [veh/h]	34	0	63	0	30	13	21	928	78	139	1402	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	87	87	96	89	89
g / C, Green / Cycle	0.12	0.12	0.12	0.12	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.00	0.02	0.05	0.27	0.27	0.21	0.39	0.39
s, saturation flow rate [veh/h]	1310	1479	1339	1732	445	1870	1807	656	1870	1847
c, Capacity [veh/h]	165	178	144	209	387	1352	1307	558	1390	1373
d1, Uniform Delay [s]	52.14	48.46	0.00	47.58	4.03	6.32	6.34	3.39	6.44	6.46
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.44	0.00	0.18	0.27	0.80	0.84	1.07	1.39	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.35	0.00	0.21	0.05	0.38	0.38	0.25	0.52	0.52
d, Delay for Lane Group [s/veh]	52.37	48.91	0.00	47.76	4.29	7.13	7.18	4.45	7.83	7.89
Lane Group LOS	D	D	A	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.98	1.76	0.00	1.18	0.11	4.76	4.65	0.72	7.24	7.23
50th-Percentile Queue Length [ft/ln]	24.49	44.00	0.00	29.38	2.68	118.93	116.29	18.08	180.89	180.72
95th-Percentile Queue Length [veh/ln]	1.76	3.17	0.00	2.12	0.19	8.33	8.19	1.30	11.65	11.64
95th-Percentile Queue Length [ft/ln]	44.09	79.20	0.00	52.88	4.83	208.36	204.72	32.55	291.18	290.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.37	48.91	48.91	0.00	47.76	47.76	4.29	7.15	7.18	4.45	7.86	7.89
Movement LOS	D	D	D	A	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	50.12			47.76			7.09			7.56		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.52											
Intersection LOS	A											
Intersection V/C	0.435											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	227.36	471.56	588.57	567.55
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.212	2.010	2.845	2.815
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.720	1.631	2.407	2.864
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.148

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	23	50	0	820	542	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	50	0	820	542	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	13	0	205	136	0
Total Analysis Volume [veh/h]	23	50	0	820	542	0
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.15	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	32.11	12.72	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh/ln]	0.50	0.32	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.62	8.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.83		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.96					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	38	0	0	0	4	222	20	59	356	12
Total Analysis Volume [veh/h]	52	0	152	0	0	0	15	889	80	234	1425	47
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18		93	82	82	93	86	86
g / C, Green / Cycle	0.15	0.15		0.78	0.68	0.68	0.78	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10		0.03	0.26	0.26	0.33	0.39	0.40
s, saturation flow rate [veh/h]	1708	1495		443	1870	1803	705	1870	1844
c, Capacity [veh/h]	250	219		363	1271	1225	567	1337	1318
d1, Uniform Delay [s]	45.07	48.64		5.45	8.36	8.38	4.93	8.05	8.10
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.49		0.21	0.89	0.94	2.22	1.65	1.70
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.69		0.04	0.39	0.39	0.41	0.55	0.56
d, Delay for Lane Group [s/veh]	45.22	50.12		5.67	9.25	9.31	7.14	9.70	9.81
Lane Group LOS	D	D		A	A	A	A	A	A
Critical Lane Group	No	Yes		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	4.41		0.09	5.51	5.37	1.57	8.66	8.68
50th-Percentile Queue Length [ft/ln]	34.53	110.37		2.26	137.64	134.34	39.37	216.53	217.07
95th-Percentile Queue Length [veh/ln]	2.49	7.86		0.16	9.35	9.18	2.83	13.49	13.52
95th-Percentile Queue Length [ft/ln]	62.16	196.52		4.07	233.84	229.38	70.86	337.20	337.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.22	50.12	50.12	0.00	0.00	0.00	5.67	9.28	9.31	7.14	9.75	9.81
Movement LOS	D	D	D				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	48.87			0.00			9.23			9.39		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	12.12											
Intersection LOS	B											
Intersection V/C	0.502											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	104.49	386.92	79.30
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.354	1.513	2.794	2.849
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.896	4.132	2.371	2.967
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	22.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	3	1	2	611	549	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	2	611	549	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	153	137	1
Total Analysis Volume [veh/h]	3	1	2	611	549	5
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	22.85	12.05	8.61	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.11	0.15	0.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.15		0.03		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.08					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.110

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	50	82	258	50	155	70	392	430	70	20	400	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	82	258	50	155	70	392	430	70	20	400	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	25	77	16	50	22	107	118	19	6	114	11
Total Analysis Volume [veh/h]	60	98	309	64	198	89	429	471	77	23	457	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	30	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.33	0.56	0.56	0.03	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.63	0.20	0.58	0.06	0.24	0.25	0.05	0.02	0.24	0.04
s, saturation flow rate [veh/h]	250	1534	451	1505	1810	1900	1449	1509	1900	1095
c, Capacity [veh/h]	131	977	186	455	605	1065	812	53	495	286
d1, Uniform Delay [s]	31.50	7.42	28.38	23.26	26.10	11.56	9.18	42.53	32.37	25.66
k, delay calibration	0.50	0.09	0.50	0.04	0.50	0.50	0.50	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	145.15	0.16	211.64	0.08	6.87	1.33	0.23	2.10	11.47	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

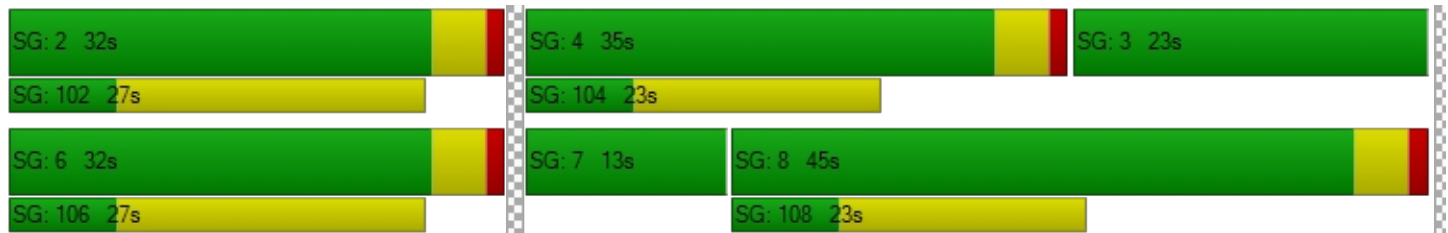
X, volume / capacity	1.21	0.32	1.41	0.20	0.71	0.44	0.09	0.44	0.92	0.16
d, Delay for Lane Group [s/veh]	176.65	7.58	240.03	23.34	32.97	12.90	9.42	44.63	43.84	25.76
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.19	2.52	13.91	1.36	8.90	5.48	0.71	0.53	10.96	0.76
50th-Percentile Queue Length [ft]	204.87	63.11	347.70	34.06	222.49	136.95	17.81	13.17	274.04	18.91
95th-Percentile Queue Length [veh]	14.16	4.54	23.55	2.45	13.79	9.32	1.28	0.95	16.39	1.36
95th-Percentile Queue Length [ft]	354.02	113.59	588.75	61.31	344.80	232.91	32.06	23.71	409.78	34.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	176.65	176.65	7.58	240.03	240.03	23.34	32.97	12.90	9.42	44.63	43.84	25.76
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	64.78			185.08			21.44			42.29		
Approach LOS	E			F			C			D		
d_I, Intersection Delay [s/veh]	59.63											
Intersection LOS	E											
Intersection V/C	1.110											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.534

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	878	130	150	782	40	230	380	280	40	210	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	878	130	150	782	40	230	380	280	40	210	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	239	35	39	206	11	61	101	75	12	61	9
Total Analysis Volume [veh/h]	33	956	142	158	822	42	246	406	299	47	244	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	42	42	42	39	39	39	25	25	25
g / C, Green / Cycle	0.33	0.33	0.33	0.46	0.46	0.46	0.44	0.44	0.44	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.26	0.10	0.18	0.23	0.03	0.18	0.21	0.19	0.05	0.07	0.08
s, saturation flow rate [veh/h]	662	3618	1450	875	3618	1437	1341	1900	1537	978	1900	1787
c, Capacity [veh/h]	183	1205	483	382	1668	662	634	830	671	171	519	488
d1, Uniform Delay [s]	33.87	27.25	22.22	17.79	16.94	13.48	16.78	18.18	17.75	38.92	25.71	25.79
k, delay calibration	0.50	0.50	0.50	0.43	0.50	0.50	0.44	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	5.42	1.54	2.84	1.04	0.18	1.59	0.17	0.17	0.32	0.10	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.79	0.29	0.41	0.49	0.06	0.39	0.49	0.45	0.27	0.27	0.28
d, Delay for Lane Group [s/veh]	36.03	32.66	23.76	20.63	17.98	13.67	18.37	18.35	17.92	39.24	25.82	25.91
Lane Group LOS	D	C	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.74	9.87	2.38	2.10	5.76	0.48	3.47	5.82	4.19	0.98	2.31	2.26
50th-Percentile Queue Length [ft]	18.60	246.84	59.49	52.44	144.06	12.07	86.71	145.54	104.75	24.51	57.76	56.54
95th-Percentile Queue Length [veh]	1.34	15.03	4.28	3.78	9.70	0.87	6.24	9.78	7.54	1.76	4.16	4.07
95th-Percentile Queue Length [ft]	33.48	375.68	107.09	94.40	242.48	21.73	156.09	244.47	188.56	44.12	103.96	101.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.03	32.66	23.76	20.63	17.98	13.67	18.37	18.35	17.92	39.24	25.86	25.91
Movement LOS	D	C	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	31.65			18.21			18.22			27.79		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	23.55											
Intersection LOS	C											
Intersection V/C	0.534											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	201	150	70	199	50	100	850	60	30	500	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	201	150	70	199	50	100	850	60	30	500	30
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	57	43	20	57	14	26	222	16	9	150	9
Total Analysis Volume [veh/h]	23	228	170	80	227	57	105	889	63	36	602	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	54	45	45	54	43	43
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.60	0.50	0.50	0.60	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.15	0.11	0.07	0.16	0.11	0.25	0.26	0.05	0.17	0.17
s, saturation flow rate [veh/h]	1691	1487	1142	1812	973	1900	1828	751	1900	1841
c, Capacity [veh/h]	549	444	185	541	625	953	917	475	904	876
d1, Uniform Delay [s]	25.54	24.99	39.91	26.25	8.16	14.96	15.04	8.58	14.89	14.93
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.20	0.59	0.29	0.05	1.91	2.05	0.31	1.10	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.46	0.38	0.43	0.52	0.17	0.51	0.51	0.08	0.36	0.36
d, Delay for Lane Group [s/veh]	25.76	25.20	40.50	26.55	8.21	16.87	17.09	8.89	15.98	16.08
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.20	2.79	1.71	4.89	0.81	6.70	6.60	0.30	4.25	4.19
50th-Percentile Queue Length [ft]	104.94	69.71	42.84	122.32	20.16	167.38	165.02	7.60	106.15	104.79
95th-Percentile Queue Length [veh]	7.56	5.02	3.08	8.52	1.45	10.94	10.81	0.55	7.63	7.55
95th-Percentile Queue Length [ft]	188.89	125.47	77.12	213.01	36.30	273.47	270.36	13.68	190.63	188.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.76	25.76	25.20	40.50	26.55	26.55	8.21	16.97	17.09	8.89	16.03	16.08
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	25.53			29.61			16.11			15.65		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.52											
Intersection LOS	B											
Intersection V/C	0.424											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	495	200	75	438	160	110	840	184	100	590	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	495	200	75	438	160	110	840	184	100	590	40
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	131	53	20	116	42	28	217	47	28	163	11
Total Analysis Volume [veh/h]	32	524	212	79	464	169	114	867	190	110	650	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	45	45	45	66	55	55	66	55	55
g / C, Green / Cycle	0.28	0.28	0.28	0.37	0.37	0.37	0.55	0.45	0.45	0.55	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.03	0.20	0.21	0.08	0.24	0.11	0.12	0.29	0.29	0.15	0.18	0.19
s, saturation flow rate [veh/h]	943	1900	1635	952	1900	1503	913	1900	1740	724	1900	1846
c, Capacity [veh/h]	113	534	460	298	710	562	499	862	790	367	862	838
d1, Uniform Delay [s]	55.32	38.89	39.44	27.34	31.11	26.49	14.05	25.07	25.35	16.73	21.95	21.99
k, delay calibration	0.04	0.12	0.15	0.10	0.09	0.04	0.31	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	2.00	3.52	0.44	0.84	0.11	0.67	3.50	4.10	2.09	1.42	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

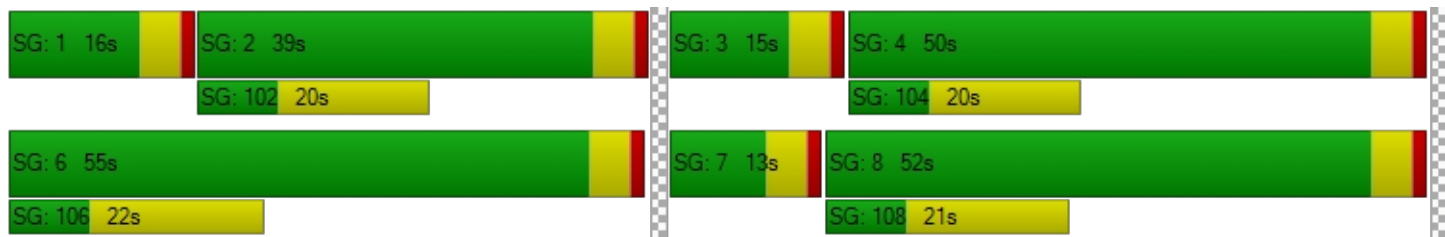
X, volume / capacity	0.28	0.72	0.76	0.27	0.65	0.30	0.23	0.63	0.65	0.30	0.41	0.41
d, Delay for Lane Group [s/veh]	55.83	40.89	42.96	27.78	31.95	26.60	14.71	28.57	29.45	18.82	23.38	23.47
Lane Group LOS	E	D	D	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.96	10.51	9.84	1.52	11.22	3.44	1.57	12.51	12.01	1.63	6.92	6.80
50th-Percentile Queue Length [ft]	24.07	262.67	246.12	38.08	280.41	86.12	39.16	312.79	300.16	40.79	173.05	169.88
95th-Percentile Queue Length [veh]	1.73	15.82	14.99	2.74	16.71	6.20	2.82	18.31	17.69	2.94	11.24	11.07
95th-Percentile Queue Length [ft]	43.33	395.56	374.76	68.54	417.72	155.01	70.49	457.81	442.23	73.43	280.92	276.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.83	41.43	42.96	27.78	31.95	26.60	14.71	28.90	29.45	18.82	23.42	23.47
Movement LOS	E	D	D	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	42.45			30.21			27.61			22.79		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	30.33											
Intersection LOS	C											
Intersection V/C	0.571											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	80	400	110	120	280	80	140	994	160	50	825	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	400	110	120	280	80	140	994	160	50	825	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	115	32	34	79	22	36	256	41	13	220	8
Total Analysis Volume [veh/h]	92	459	126	135	314	90	144	1026	165	53	878	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	10	46	46	11	65	65	49	49	49
g / C, Green / Cycle	0.26	0.26	0.26	0.09	0.38	0.38	0.09	0.54	0.54	0.41	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.09	0.24	0.09	0.07	0.17	0.06	0.08	0.32	0.34	0.11	0.24	0.24
s, saturation flow rate [veh/h]	1038	1900	1397	1810	1900	1433	1810	1900	1734	478	1900	1863
c, Capacity [veh/h]	183	491	361	157	728	549	171	1026	936	135	773	758
d1, Uniform Delay [s]	51.09	43.51	36.27	54.04	27.31	24.33	53.39	18.67	19.12	47.92	27.80	27.86
k, delay calibration	0.04	0.20	0.04	0.05	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	14.29	0.21	6.11	0.15	0.05	4.18	2.52	3.12	8.35	3.32	3.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.94	0.35	0.86	0.43	0.16	0.84	0.59	0.62	0.39	0.59	0.60
d, Delay for Lane Group [s/veh]	51.89	57.80	36.48	60.15	27.46	24.38	57.57	21.19	22.24	56.26	31.12	31.31
Lane Group LOS	D	E	D	E	C	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.69	15.02	3.01	4.25	6.59	1.68	4.47	11.85	11.74	1.82	10.90	10.81
50th-Percentile Queue Length [ft]	67.24	375.53	75.33	106.32	164.71	42.05	111.68	296.30	293.61	45.40	272.50	270.23
95th-Percentile Queue Length [veh]	4.84	21.38	5.42	7.63	10.80	3.03	7.93	17.50	17.36	3.27	16.31	16.20
95th-Percentile Queue Length [ft]	121.04	534.44	135.60	190.87	269.95	75.69	198.33	437.45	434.12	81.71	407.86	405.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.89	57.80	36.48	60.15	27.46	24.38	57.57	21.62	22.24	56.26	31.21	31.31
Movement LOS	D	E	D	E	C	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.03			35.14			25.57			32.60		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.25											
Intersection LOS	C											
Intersection V/C	0.652											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	50	110	156	190	80	140	1254	220	30	955	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	50	110	156	190	80	140	1254	220	30	955	40
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	14	31	44	60	25	37	332	58	8	265	11
Total Analysis Volume [veh/h]	23	56	123	175	240	101	148	1330	233	33	1061	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	10	66	66	5	60	60
g / C, Green / Cycle	0.29	0.29	0.09	0.55	0.55	0.04	0.50	0.50
(v / s)_i Volume / Saturation Flow Rate	0.11	0.28	0.08	0.42	0.44	0.02	0.46	0.29
s, saturation flow rate [veh/h]	1656	1200	1810	1900	1770	1810	1200	1862
c, Capacity [veh/h]	488	354	159	1047	975	70	603	935
d1, Uniform Delay [s]	33.44	41.67	54.33	20.69	21.45	56.43	27.72	21.08
k, delay calibration	0.04	0.41	0.09	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	34.91	17.74	5.05	6.58	1.79	21.97	2.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

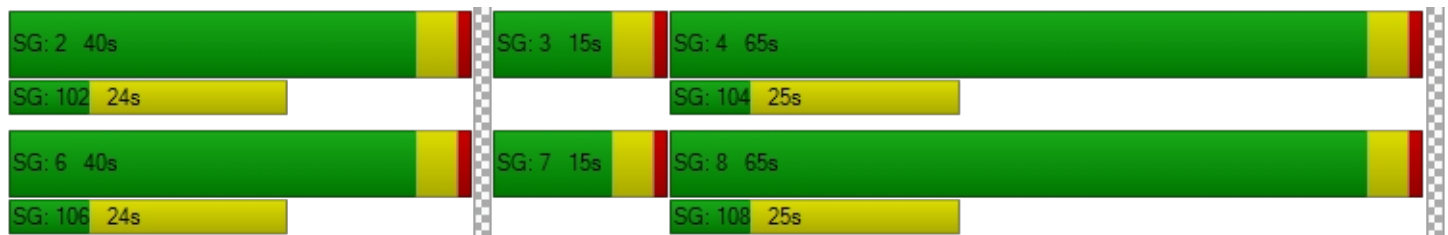
X, volume / capacity	0.37	0.96	0.93	0.75	0.79	0.47	0.92	0.59
d, Delay for Lane Group [s/veh]	33.61	76.58	72.07	25.74	28.03	58.22	49.69	23.78
Lane Group LOS	C	E	E	C	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.16	13.25	5.22	17.81	18.35	1.01	17.88	11.35
50th-Percentile Queue Length [ft]	104.01	331.30	130.55	445.23	458.72	25.37	446.90	283.83
95th-Percentile Queue Length [veh]	7.49	19.22	8.97	24.73	25.37	1.83	24.81	16.88
95th-Percentile Queue Length [ft]	187.22	480.55	224.25	618.25	634.34	45.66	620.25	421.97

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	33.61	33.61	0.00	76.58	76.58	72.07	26.67	28.03	58.22	37.36	23.78
Movement LOS		C	C		E	E	E	C	C	E	D	C
d_A, Approach Delay [s/veh]		33.61			76.58			30.78			37.44	
Approach LOS		C			E			C			D	
d_I, Intersection Delay [s/veh]	37.82											
Intersection LOS	D											
Intersection V/C	0.830											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	79.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.954

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	660	280	870	250	724	0	0	1245	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	660	280	870	250	724	0	0	1245	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	175	74	231	66	190	0	0	323	10
Total Analysis Volume [veh/h]	0	0	0	700	297	923	263	762	0	0	1294	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	19	75	52	52
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.16	0.63	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.31	0.31	0.15	0.21	0.49	0.49
s, saturation flow rate [veh/h]	1810	1861	1425	1559	1810	3618	1800	900
c, Capacity [veh/h]	534	549	421	460	289	2272	774	387
d1, Uniform Delay [s]	40.92	40.52	42.25	42.25	49.52	10.50	34.16	34.16
k, delay calibration	0.37	0.35	0.49	0.49	0.22	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.11	15.16	59.71	59.46	19.01	0.40	82.32	93.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.92	0.90	1.06	1.06	0.91	0.34	1.15	1.15
d, Delay for Lane Group [s/veh]	60.03	55.68	101.9	101.7	68.53	10.90	116.48	127.62
Lane Group LOS	E	E	F	F	E	B	F	F
Critical Lane Group	No	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	16.31	15.68	18.86	20.60	9.25	4.71	19.79	20.99
50th-Percentile Queue Length [ft]	407.7	391.9	471.4	514.9	231.26	117.80	494.83	524.77
95th-Percentile Queue Length [veh]	22.93	22.17	26.93	29.15	14.24	8.27	29.72	31.29
95th-Percentile Queue Length [ft]	573.3	554.3	673.1	728.7	355.96	206.80	742.99	782.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	58.66	57.46	101.83	68.53	10.90	0.00	0.00	119.95	127.62
Movement LOS				E	E	F	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			79.26			25.69			120.19		
Approach LOS	A			E			C			F		
d_I, Intersection Delay [s/veh]	79.21											
Intersection LOS	E											
Intersection V/C	0.954											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	132.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.050

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌						⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	170	260	240	0	0	0	0	804	360	560	1245	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	260	240	0	0	0	0	804	360	560	1245	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	51	78	72	0	0	0	0	214	96	149	332	0
Total Analysis Volume [veh/h]	204	312	288	0	0	0	0	855	383	597	1327	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24		70	70	70	12	87
g / C, Green / Cycle	0.20	0.20	0.20		0.59	0.59	0.59	0.10	0.73
(v / s)_j Volume / Saturation Flow Rate	0.15	0.14	0.18		0.17	0.20	0.62	0.25	0.37
s, saturation flow rate [veh/h]	1830	1729	1581		3618	1577	500	2400	3618
c, Capacity [veh/h]	362	342	313		2119	924	293	243	2624
d1, Uniform Delay [s]	45.15	45.15	47.20		12.42	12.81	24.85	53.92	7.14
k, delay calibration	0.07	0.07	0.20		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.92	2.01	17.58		0.03	0.08	68.31	666.65	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

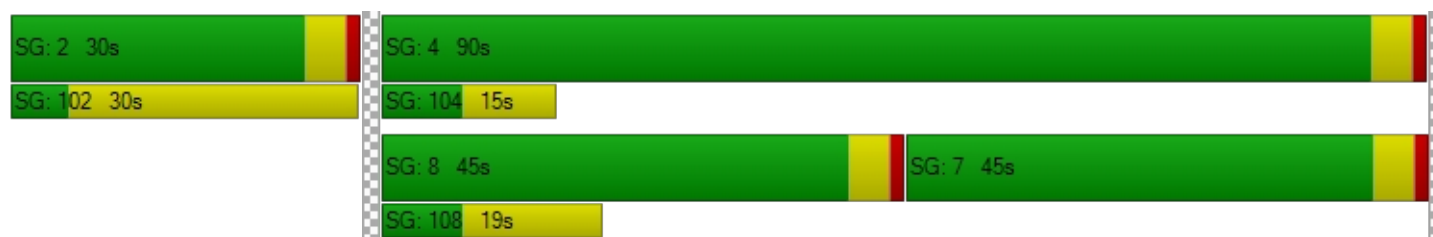
X, volume / capacity	0.73	0.73	0.92		0.29	0.34	1.06	2.45	0.51
d, Delay for Lane Group [s/veh]	47.07	47.15	64.78		12.45	12.89	93.17	720.57	7.84
Lane Group LOS	D	D	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	7.53	7.11	9.85		4.00	4.13	13.11	26.19	6.82
50th-Percentile Queue Length [ft]	188.22	177.84	246.19		99.92	103.34	327.76	654.73	170.56
95th-Percentile Queue Length [veh]	12.03	11.49	14.99		7.19	7.44	19.85	42.43	11.11
95th-Percentile Queue Length [ft]	300.72	287.20	374.86		179.86	186.01	496.13	1060.75	277.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.07	47.14	64.78	0.00	0.00	0.00	0.00	12.46	77.76	720.57	7.84	0.00
Movement LOS	D	D	E					B	E	F	A	
d_A, Approach Delay [s/veh]	53.44			0.00			32.74			229.00		
Approach LOS	D			A			C			F		
d_I, Intersection Delay [s/veh]	132.14											
Intersection LOS	F											
Intersection V/C	1.050											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.733

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	170	360	50	140	1054	120	80	1025	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	170	360	50	140	1054	120	80	1025	110
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	49	103	14	41	308	35	21	275	30
Total Analysis Volume [veh/h]	107	437	139	195	412	57	164	1232	140	86	1102	118
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	13	35	35	10	51	51	7	48	48
g / C, Green / Cycle	0.07	0.25	0.25	0.11	0.29	0.29	0.09	0.43	0.43	0.06	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.11	0.13	0.13	0.09	0.34	0.09	0.05	0.30	0.07
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1799	1810	3618	1560	1810	3618	1575
c, Capacity [veh/h]	133	475	395	203	550	520	157	1540	664	109	1444	628
d1, Uniform Delay [s]	54.79	43.83	37.01	53.01	34.68	34.77	54.81	30.03	21.76	55.65	31.17	23.43
k, delay calibration	0.04	0.24	0.11	0.32	0.11	0.11	0.15	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	14.92	0.53	41.42	0.54	0.59	51.24	4.46	0.72	4.68	3.88	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

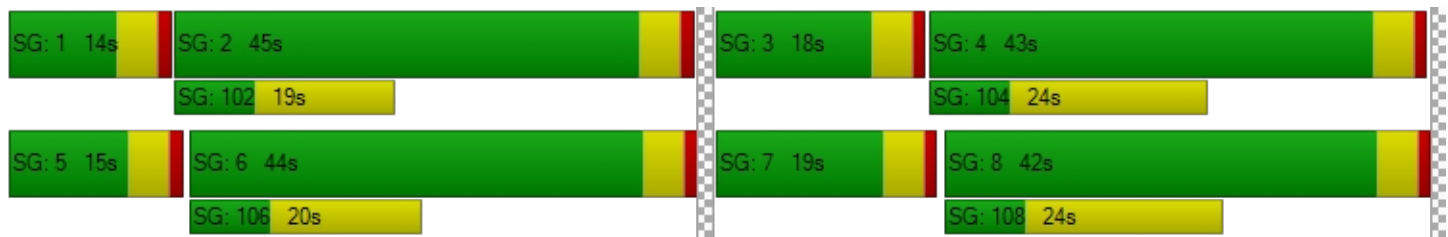
X, volume / capacity	0.81	0.92	0.35	0.96	0.43	0.44	1.04	0.80	0.21	0.79	0.76	0.19
d, Delay for Lane Group [s/veh]	59.13	58.75	37.55	94.43	35.23	35.36	106.05	34.49	22.48	60.33	35.04	24.09
Lane Group LOS	E	E	D	F	D	D	F	C	C	E	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	14.39	3.40	8.13	5.71	5.51	6.94	15.93	2.60	2.69	14.18	2.27
50th-Percentile Queue Length [ft]	83.01	359.87	84.90	203.17	142.77	137.82	173.40	398.30	64.99	67.26	354.62	56.84
95th-Percentile Queue Length [veh]	5.98	20.62	6.11	12.80	9.63	9.36	11.43	22.48	4.68	4.84	20.36	4.09
95th-Percentile Queue Length [ft]	149.41	515.43	152.81	320.05	240.74	234.09	285.81	561.95	116.97	121.06	509.04	102.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	58.75	37.55	94.43	35.28	35.36	106.05	34.49	22.48	60.33	35.04	24.09
Movement LOS	E	E	D	F	D	D	F	C	C	E	D	C
d_A, Approach Delay [s/veh]	54.50			52.66			41.04			35.72		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	43.42											
Intersection LOS	D											
Intersection V/C	0.733											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	50	679	10	94	614	60	80	390	33	80	360	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	679	10	94	614	60	80	390	33	80	360	10
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	182	3	25	166	16	22	105	9	24	109	3
Total Analysis Volume [veh/h]	54	729	11	101	663	65	86	419	35	97	436	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	27	27	27	27	27
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.07	0.20	0.20	0.14	0.19	0.20	0.09	0.22	0.02	0.10	0.24
s, saturation flow rate [veh/h]	738	1900	1887	727	1900	1833	953	1900	1570	980	1890
c, Capacity [veh/h]	385	1028	1021	381	1028	991	204	654	540	225	650
d1, Uniform Delay [s]	15.54	10.47	10.48	16.73	10.47	10.48	34.04	22.08	17.60	32.98	22.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	0.99	0.99	1.70	0.98	1.02	0.51	0.39	0.02	0.48	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

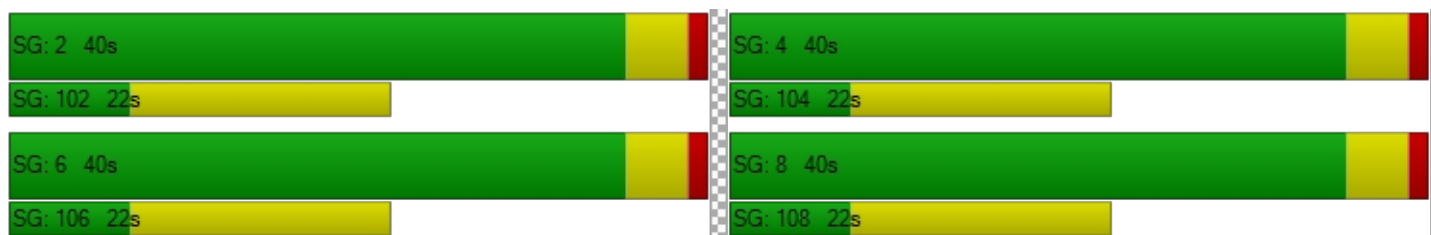
X, volume / capacity	0.14	0.36	0.36	0.27	0.36	0.36	0.42	0.64	0.06	0.43	0.69
d, Delay for Lane Group [s/veh]	16.30	11.46	11.47	18.43	11.45	11.50	34.56	22.47	17.62	33.46	23.05
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.69	3.65	3.63	1.40	3.63	3.53	1.59	6.24	0.41	1.76	6.83
50th-Percentile Queue Length [ft]	17.23	91.14	90.77	35.09	90.73	88.35	39.63	156.11	10.35	43.98	170.80
95th-Percentile Queue Length [veh]	1.24	6.56	6.54	2.53	6.53	6.36	2.85	10.34	0.74	3.17	11.12
95th-Percentile Queue Length [ft]	31.02	164.06	163.39	63.16	163.32	159.03	71.33	258.56	18.62	79.16	277.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.30	11.47	11.47	18.43	11.47	11.50	34.56	22.47	17.62	33.46	23.05	23.05
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.80			12.32			24.08			24.90		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.04											
Intersection LOS	B											
Intersection V/C	0.433											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	560	30	70	580	50	20	249	30	120	513	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	560	30	70	580	50	20	249	30	120	513	150
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	155	8	19	155	13	6	73	9	32	138	40
Total Analysis Volume [veh/h]	100	621	33	75	622	54	23	290	35	129	553	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	31	31	31	31	31
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.17	0.09	0.18	0.18	0.03	0.18	0.12	0.29	0.10
s, saturation flow rate [veh/h]	774	1900	1860	791	1900	1838	869	1855	1066	1900	1579
c, Capacity [veh/h]	415	1058	1035	426	1058	1023	126	633	275	648	539
d1, Uniform Delay [s]	16.66	10.70	10.71	15.76	10.79	10.81	41.43	23.68	34.20	27.55	21.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.77	0.79	0.90	0.81	0.85	0.25	0.24	0.46	4.26	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

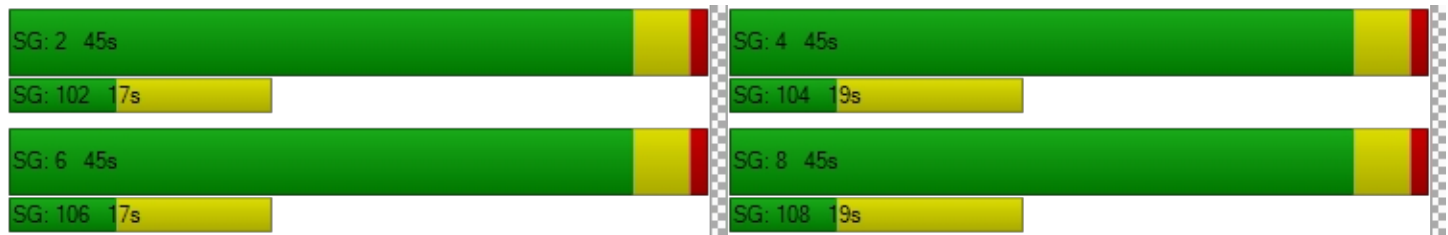
X, volume / capacity	0.24	0.31	0.31	0.18	0.32	0.33	0.18	0.51	0.47	0.85	0.30
d, Delay for Lane Group [s/veh]	18.03	11.47	11.50	16.66	11.60	11.65	41.69	23.92	34.66	31.81	21.88
Lane Group LOS	B	B	B	B	B	B	D	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.43	3.40	3.35	1.01	3.56	3.48	0.50	5.32	2.58	11.21	2.43
50th-Percentile Queue Length [ft]	35.70	84.93	83.71	25.33	88.99	86.97	12.38	132.93	64.53	280.22	60.85
95th-Percentile Queue Length [veh]	2.57	6.11	6.03	1.82	6.41	6.26	0.89	9.10	4.65	16.70	4.38
95th-Percentile Queue Length [ft]	64.26	152.87	150.68	45.59	160.18	156.55	22.29	227.47	116.16	417.49	109.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.03	11.49	11.50	16.66	11.63	11.65	41.69	23.92	23.92	34.66	31.81	21.88
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.36			12.13			25.10			30.34		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.57											
Intersection LOS	B											
Intersection V/C	0.472											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	450	20	100	340	60	80	228	30	30	122	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	450	20	100	340	60	80	228	30	30	122	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	126	6	26	89	16	21	59	8	8	33	13
Total Analysis Volume [veh/h]	56	503	22	104	354	63	83	238	31	32	131	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.44	0.44	0.44
(v / s)_j Volume / Saturation Flow Rate	0.06	0.28	0.12	0.23	0.21	0.09	0.04
s, saturation flow rate [veh/h]	955	1871	885	1792	1701	1750	1506
c, Capacity [veh/h]	312	767	252	735	817	836	658
d1, Uniform Delay [s]	20.37	14.55	24.63	13.64	11.78	10.43	9.89
k, delay calibration	0.04	0.06	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.57	0.40	0.26	1.65	0.52	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

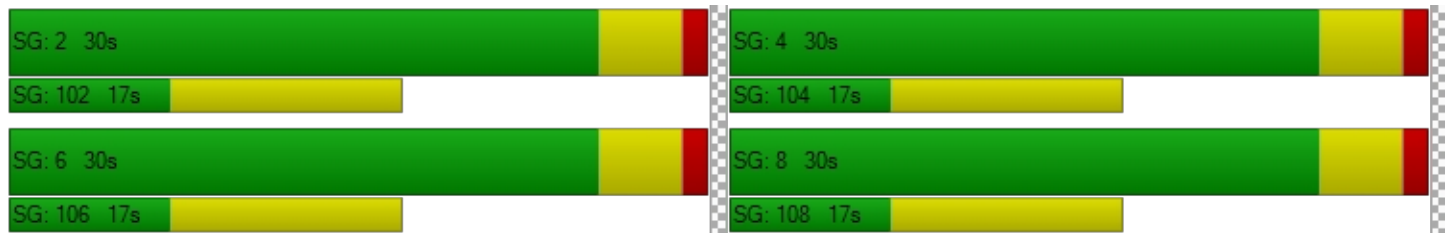
X, volume / capacity	0.18	0.68	0.41	0.57	0.43	0.19	0.08
d, Delay for Lane Group [s/veh]	20.47	15.12	25.03	13.90	13.44	10.95	10.13
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	5.20	1.36	3.84	3.20	1.28	0.41
50th-Percentile Queue Length [ft]	15.76	130.09	34.03	95.93	80.12	32.04	10.23
95th-Percentile Queue Length [veh]	1.13	8.94	2.45	6.91	5.77	2.31	0.74
95th-Percentile Queue Length [ft]	28.37	223.61	61.26	172.68	144.22	57.67	18.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.47	15.12	15.12	25.03	13.90	13.90	13.44	13.44	13.44	10.95	10.95	10.13
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.63			16.12			13.44			10.74		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.69											
Intersection LOS	B											
Intersection V/C	0.487											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	962	46	60	912	90	99	398	90	100	272	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	962	46	60	912	90	99	398	90	100	272	60
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	274	13	16	244	24	27	107	24	30	82	18
Total Analysis Volume [veh/h]	57	1095	52	64	976	96	106	428	97	121	330	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	29	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.11	0.30	0.31	0.13	0.29	0.30	0.10	0.23	0.06	0.13	0.17	0.05
s, saturation flow rate [veh/h]	531	1900	1857	497	1900	1788	1030	1900	1550	966	1900	1473
c, Capacity [veh/h]	249	986	963	233	986	927	298	696	568	235	696	539
d1, Uniform Delay [s]	21.99	13.31	13.35	23.24	12.98	13.14	28.38	20.73	17.13	32.99	19.43	16.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.13	2.55	2.66	2.89	2.23	2.53	0.27	0.33	0.05	0.65	0.19	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

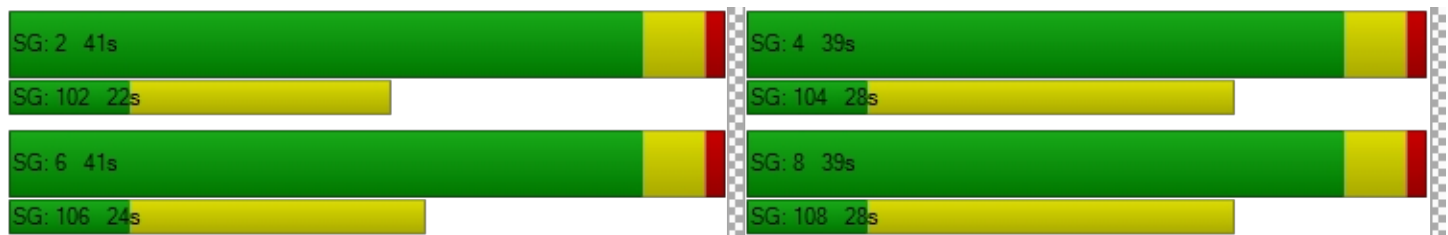
X, volume / capacity	0.23	0.59	0.59	0.27	0.55	0.57	0.36	0.62	0.17	0.51	0.47	0.14
d, Delay for Lane Group [s/veh]	24.12	15.86	16.01	26.13	15.21	15.67	28.65	21.06	17.18	33.63	19.62	16.94
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.94	7.01	6.95	1.12	6.41	6.34	1.77	6.24	1.17	2.28	4.59	0.88
50th-Percentile Queue Length [ft]	23.60	175.21	173.69	28.03	160.13	158.54	44.35	155.99	29.13	57.07	114.77	22.06
95th-Percentile Queue Length [veh]	1.70	11.35	11.27	2.02	10.56	10.47	3.19	10.34	2.10	4.11	8.10	1.59
95th-Percentile Queue Length [ft]	42.47	283.75	281.75	50.46	263.89	261.79	79.83	258.41	52.43	102.73	202.62	39.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.12	15.93	16.01	26.13	15.41	15.67	28.65	21.06	17.18	33.63	19.62	16.94
Movement LOS	C	B	B	C	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	16.32			16.04			21.74			22.48		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.13											
Intersection LOS	B											
Intersection V/C	0.532											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.715

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	161	60	80	159	60	40	509	50	20	318	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	161	60	80	159	60	40	509	50	20	318	30
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	44	17	25	51	19	11	135	13	5	85	8
Total Analysis Volume [veh/h]	11	178	66	102	203	76	42	539	53	21	339	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.23	0.43	0.05	0.04	0.28	0.03	0.02	0.18	0.02
s, saturation flow rate [veh/h]	1128	707	1579	1050	1900	1537	878	1900	1540
c, Capacity [veh/h]	431	301	538	539	1035	837	395	1035	838
d1, Uniform Delay [s]	20.92	26.43	18.28	13.67	11.59	8.60	17.46	10.10	8.48
k, delay calibration	0.19	0.50	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.25	55.55	0.12	0.28	1.88	0.15	0.26	0.85	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.59	1.01	0.14	0.08	0.52	0.06	0.05	0.33	0.04
d, Delay for Lane Group [s/veh]	23.17	81.97	18.39	13.96	13.46	8.74	17.71	10.95	8.56
Lane Group LOS	C	F	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	3.69	10.39	0.94	0.47	6.00	0.43	0.28	3.24	0.26
50th-Percentile Queue Length [ft]	92.35	259.70	23.44	11.85	150.06	10.81	6.96	80.97	6.43
95th-Percentile Queue Length [veh]	6.65	15.81	1.69	0.85	10.02	0.78	0.50	5.83	0.46
95th-Percentile Queue Length [ft]	166.24	395.28	42.20	21.33	250.51	19.46	12.53	145.75	11.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.17	23.17	23.17	81.97	81.97	18.39	13.96	13.46	8.74	17.71	10.95	8.56
Movement LOS	C	C	C	F	F	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	23.17			69.29			13.10			11.12		
Approach LOS	C			E			B			B		
d_I, Intersection Delay [s/veh]	27.06											
Intersection LOS	C											
Intersection V/C	0.715											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	672	90	40	627	129	40	420	80	78	390	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	672	90	40	627	129	40	420	80	78	390	10
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	181	24	10	164	34	11	111	21	20	102	3
Total Analysis Volume [veh/h]	54	724	97	42	657	135	42	444	85	82	408	10
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	27	27	27	27	27	27
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.08	0.22	0.22	0.06	0.21	0.22	0.04	0.23	0.05	0.09	0.21	0.01
s, saturation flow rate [veh/h]	693	1900	1807	675	1900	1766	985	1900	1554	955	1900	1548
c, Capacity [veh/h]	363	1030	980	354	1030	958	221	651	532	197	651	531
d1, Uniform Delay [s]	15.91	10.75	10.78	15.83	10.67	10.71	31.38	22.55	18.28	34.46	22.00	17.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	1.19	1.27	0.68	1.14	1.25	0.15	1.26	0.05	0.52	0.60	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.41	0.41	0.12	0.40	0.40	0.19	0.68	0.16	0.42	0.63	0.02
d, Delay for Lane Group [s/veh]	16.77	11.94	12.05	16.52	11.81	11.96	31.53	23.81	18.33	34.98	22.60	17.39
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.71	4.25	4.10	0.54	4.10	3.90	0.73	7.03	1.06	1.54	6.21	0.12
50th-Percentile Queue Length [ft]	17.63	106.20	102.61	13.59	102.47	97.61	18.21	175.73	26.58	38.51	155.17	2.97
95th-Percentile Queue Length [veh]	1.27	7.63	7.39	0.98	7.38	7.03	1.31	11.38	1.91	2.77	10.29	0.21
95th-Percentile Queue Length [ft]	31.74	190.71	184.70	24.46	184.44	175.70	32.78	284.44	47.84	69.31	257.32	5.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.77	11.99	12.05	16.52	11.87	11.96	31.53	23.81	18.33	34.98	22.60	17.39
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.29			12.12			23.56			24.53		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.75											
Intersection LOS	B											
Intersection V/C	0.456											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	426	50	88	399	100	10	410	62	70	380	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	426	50	88	399	100	10	410	62	70	380	40
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	110	13	24	109	27	3	113	17	19	106	11
Total Analysis Volume [veh/h]	31	441	52	96	436	109	11	450	68	78	422	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.03	0.10	0.23	0.07	0.01	0.24	0.04	0.08	0.22	0.03
s, saturation flow rate [veh/h]	965	1900	1565	962	1900	1543	972	1900	1518	944	1900	1553
c, Capacity [veh/h]	440	1052	867	437	1052	855	231	598	477	213	598	488
d1, Uniform Delay [s]	15.27	9.06	7.19	16.52	9.03	7.48	26.65	21.52	17.19	29.76	21.11	16.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	1.23	0.13	1.15	1.20	0.31	0.03	0.76	0.05	0.39	0.58	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.42	0.06	0.22	0.41	0.13	0.05	0.75	0.14	0.37	0.71	0.09
d, Delay for Lane Group [s/veh]	15.57	10.29	7.33	17.68	10.23	7.79	26.68	22.28	17.24	30.16	21.69	16.93
Lane Group LOS	B	B	A	B	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.34	3.56	0.33	1.16	3.51	0.73	0.16	6.27	0.75	1.24	5.75	0.48
50th-Percentile Queue Length [ft]	8.58	89.05	8.30	29.05	87.70	18.18	3.93	156.67	18.70	30.90	143.64	11.89
95th-Percentile Queue Length [veh]	0.62	6.41	0.60	2.09	6.31	1.31	0.28	10.37	1.35	2.23	9.68	0.86
95th-Percentile Queue Length [ft]	15.45	160.28	14.93	52.29	157.85	32.72	7.08	259.31	33.66	55.63	241.92	21.40

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.57	10.29	7.33	17.68	10.23	7.79	26.68	22.28	17.24	30.16	21.69	16.93
Movement LOS	B	B	A	B	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	10.31			10.93			21.72			22.52		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.15											
Intersection LOS	B											
Intersection V/C	0.469											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	60	410	60	230	620	60	20	342	130	110	448	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	410	60	230	620	60	20	342	130	110	448	40
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	109	16	61	163	16	6	103	39	30	122	11
Total Analysis Volume [veh/h]	64	436	64	243	654	63	24	411	156	120	487	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.09	0.13	0.14	0.27	0.19	0.19	0.03	0.22	0.10	0.12	0.26	0.03
s, saturation flow rate [veh/h]	745	1900	1803	909	1900	1830	919	1900	1516	975	1900	1554
c, Capacity [veh/h]	350	907	861	443	907	873	228	732	584	277	732	599
d1, Uniform Delay [s]	17.09	11.04	11.07	18.74	11.83	11.85	26.83	16.86	14.73	26.91	17.77	13.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.15	0.77	0.83	4.84	1.32	1.39	0.07	0.25	0.09	0.40	0.39	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

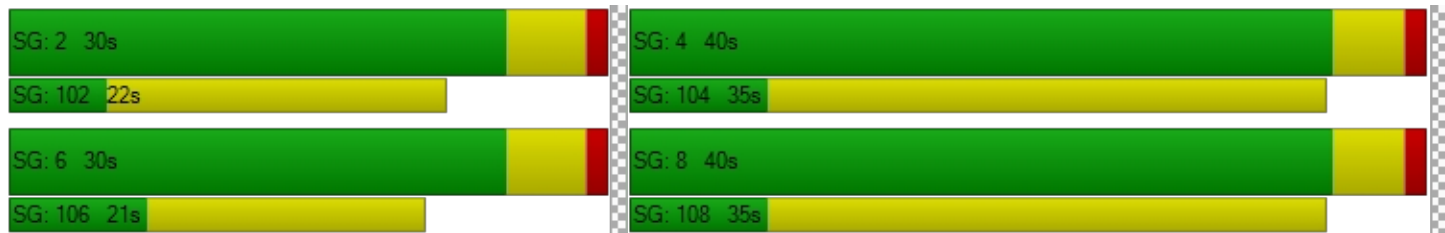
X, volume / capacity	0.18	0.28	0.29	0.55	0.40	0.40	0.11	0.56	0.27	0.43	0.66	0.07
d, Delay for Lane Group [s/veh]	18.24	11.81	11.90	23.58	13.15	13.24	26.90	17.11	14.82	27.30	18.16	13.61
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.91	2.73	2.64	3.45	3.30	3.22	0.35	4.81	1.59	1.82	6.02	0.40
50th-Percentile Queue Length [ft]	22.81	68.16	66.09	86.19	82.48	80.42	8.70	120.28	39.82	45.56	150.58	10.11
95th-Percentile Queue Length [veh]	1.64	4.91	4.76	6.21	5.94	5.79	0.63	8.41	2.87	3.28	10.05	0.73
95th-Percentile Queue Length [ft]	41.05	122.68	118.97	155.14	148.47	144.76	15.66	210.22	71.68	82.00	251.20	18.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.24	11.85	11.90	23.58	13.19	13.24	26.90	17.11	14.82	27.30	18.16	13.61
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.58			15.82			16.91			19.55		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.27											
Intersection LOS	B											
Intersection V/C	0.524											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	380	50	60	490	56	90	71	80	50	79	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	380	50	60	490	56	90	71	80	50	79	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	99	13	16	131	15	29	23	26	15	23	6
Total Analysis Volume [veh/h]	42	398	52	64	525	60	115	91	102	58	92	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	14	14	14	8	8
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.24	0.07	0.28	0.04	0.19	0.11
s, saturation flow rate [veh/h]	869	1839	931	1900	1485	1585	1633
c, Capacity [veh/h]	365	797	407	824	644	591	600
d1, Uniform Delay [s]	11.73	6.67	11.04	6.96	5.25	10.10	9.16
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.23	0.07	0.31	0.02	0.27	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

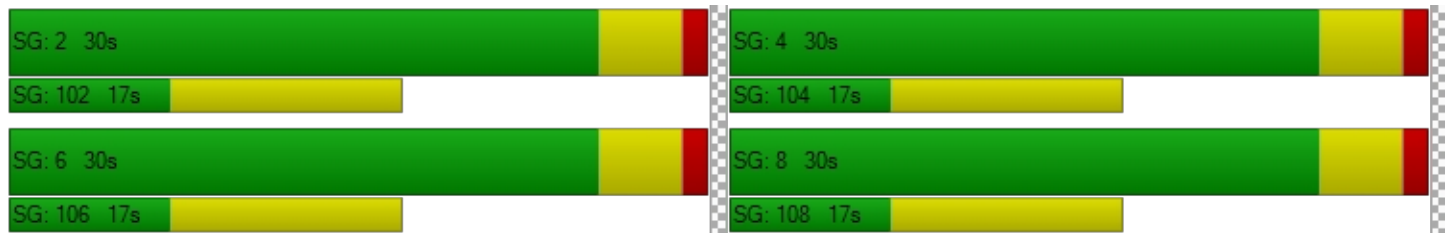
X, volume / capacity	0.11	0.56	0.16	0.64	0.09	0.52	0.29
d, Delay for Lane Group [s/veh]	11.78	6.90	11.11	7.27	5.27	10.36	9.26
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.26	0.29	1.54	0.13	1.25	0.63
50th-Percentile Queue Length [ft]	5.03	31.53	7.31	38.57	3.28	31.13	15.74
95th-Percentile Queue Length [veh]	0.36	2.27	0.53	2.78	0.24	2.24	1.13
95th-Percentile Queue Length [ft]	9.06	56.75	13.17	69.42	5.90	56.03	28.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.78	6.90	6.90	11.11	7.27	5.27	10.36	10.36	10.36	9.26	9.26	9.26
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.32			7.46			10.36			9.26		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.16											
Intersection LOS	A											
Intersection V/C	0.471											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	60	1102	60	80	1072	50	100	251	70	50	159	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1102	60	80	1072	50	100	251	70	50	159	40
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	297	16	22	290	14	26	65	18	13	42	10
Total Analysis Volume [veh/h]	65	1188	65	87	1160	54	104	261	73	52	166	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.14	0.33	0.33	0.19	0.32	0.32	0.09	0.18	0.05	0.11
s, saturation flow rate [veh/h]	467	1900	1857	450	1900	1856	1181	1813	1055	1822
c, Capacity [veh/h]	274	1143	1117	263	1143	1116	279	514	184	517
d1, Uniform Delay [s]	17.05	9.52	9.55	18.71	9.37	9.41	30.96	25.16	34.87	23.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.03	1.93	2.00	3.33	1.80	1.88	0.31	0.52	0.31	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

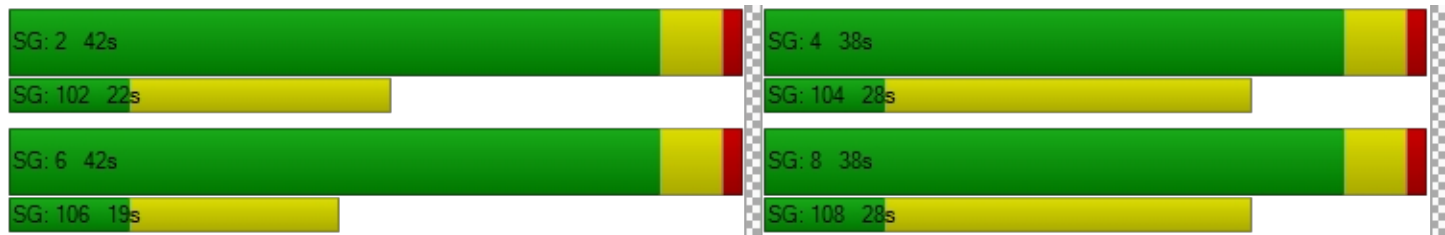
X, volume / capacity	0.24	0.55	0.56	0.33	0.53	0.54	0.37	0.65	0.28	0.40
d, Delay for Lane Group [s/veh]	19.08	11.44	11.55	22.04	11.16	11.28	31.27	25.68	35.18	23.36
Lane Group LOS	B	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.93	6.03	5.97	1.43	6.14	6.10	1.80	5.33	0.95	3.04
50th-Percentile Queue Length [ft]	23.37	150.73	149.27	35.68	153.46	152.44	45.01	133.14	23.83	75.97
95th-Percentile Queue Length [veh]	1.68	10.06	9.98	2.57	10.20	10.15	3.24	9.11	1.72	5.47
95th-Percentile Queue Length [ft]	42.06	251.40	249.45	64.23	255.05	253.69	81.01	227.76	42.89	136.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.08	11.50	11.55	22.04	11.22	11.28	31.27	25.68	25.68	35.18	23.36	23.36
Movement LOS	B	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	11.87			11.95			27.01			25.72		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.99											
Intersection LOS	B											
Intersection V/C	0.519											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	231	150	30	189	60	70	311	40	10	209	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	231	150	30	189	60	70	311	40	10	209	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	73	47	9	58	18	19	84	11	3	60	3
Total Analysis Volume [veh/h]	13	291	189	37	233	74	75	335	43	12	240	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	46	46	46	46
g / C, Green / Cycle	0.30	0.30	0.30	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.28	0.19	0.05	0.24	0.03	0.13	0.01
s, saturation flow rate [veh/h]	1746	1402	1552	1731	1537	1871	1557
c, Capacity [veh/h]	577	477	472	1059	893	1135	905
d1, Uniform Delay [s]	26.92	22.56	20.33	8.94	7.21	8.08	7.06
k, delay calibration	0.31	0.12	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.75	1.16	0.15	1.07	0.10	0.45	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.57	0.16	0.39	0.05	0.22	0.01
d, Delay for Lane Group [s/veh]	36.68	23.72	20.48	10.01	7.31	8.53	7.09
Lane Group LOS	D	C	C	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	10.03	4.04	0.98	3.56	0.30	1.94	0.08
50th-Percentile Queue Length [ft]	250.66	100.91	24.47	88.91	7.49	48.60	2.04
95th-Percentile Queue Length [veh]	15.22	7.27	1.76	6.40	0.54	3.50	0.15
95th-Percentile Queue Length [ft]	380.49	181.64	44.05	160.03	13.48	87.48	3.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.68	36.68	36.68	23.72	23.72	20.48	10.01	10.01	7.31	8.53	8.53	7.09
Movement LOS	D	D	D	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	36.68			23.02			9.76			8.47		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	21.02											
Intersection LOS	C											
Intersection V/C	0.519											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	970	100	50	875	81	30	300	76	119	280	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	970	100	50	875	81	30	300	76	119	280	40
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	252	26	13	232	21	8	83	21	32	76	11
Total Analysis Volume [veh/h]	42	1007	104	53	929	86	33	331	84	129	303	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.30	0.10	0.27	0.27	0.03	0.23	0.13	0.19
s, saturation flow rate [veh/h]	564	1900	1822	515	1900	1834	1041	1823	984	1848
c, Capacity [veh/h]	269	986	945	240	986	952	289	667	238	676
d1, Uniform Delay [s]	20.13	13.16	13.22	22.35	12.69	12.72	27.00	20.81	33.22	19.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	2.41	2.57	2.11	1.98	2.07	0.06	0.83	0.72	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.16	0.57	0.58	0.22	0.52	0.53	0.11	0.62	0.54	0.51
d, Delay for Lane Group [s/veh]	21.36	15.57	15.79	24.46	14.67	14.79	27.07	21.64	33.93	20.00
Lane Group LOS	C	B	B	C	B	B	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.65	6.94	6.78	0.90	6.07	5.92	0.51	6.04	2.39	4.71
50th-Percentile Queue Length [ft]	16.26	173.46	169.56	22.52	151.65	148.07	12.77	151.04	59.63	117.67
95th-Percentile Queue Length [veh]	1.17	11.26	11.05	1.62	10.11	9.91	0.92	10.07	4.29	8.26
95th-Percentile Queue Length [ft]	29.26	281.45	276.34	40.53	252.63	247.86	22.99	251.82	107.34	206.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.36	15.67	15.79	24.46	14.72	14.79	27.07	21.64	21.64	33.93	20.00	20.00
Movement LOS	C	B	B	C	B	B	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	15.89			15.21			22.04			23.78		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.73											
Intersection LOS	B											
Intersection V/C	0.528											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	36	542	40	50	498	60	30	320	20	90	290	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	542	40	50	498	60	30	320	20	90	290	60
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	137	10	14	135	16	9	93	6	25	80	17
Total Analysis Volume [veh/h]	36	549	41	54	538	65	35	370	23	99	320	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.04	0.29	0.03	0.06	0.28	0.04	0.04	0.21	0.10	0.22
s, saturation flow rate [veh/h]	880	1900	1556	871	1900	1571	986	1870	996	1794
c, Capacity [veh/h]	374	1063	871	367	1063	879	237	578	241	554
d1, Uniform Delay [s]	17.44	9.53	6.96	18.12	9.46	7.07	27.03	21.14	28.78	21.27
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.51	1.79	0.10	0.85	1.72	0.16	0.11	0.53	0.42	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

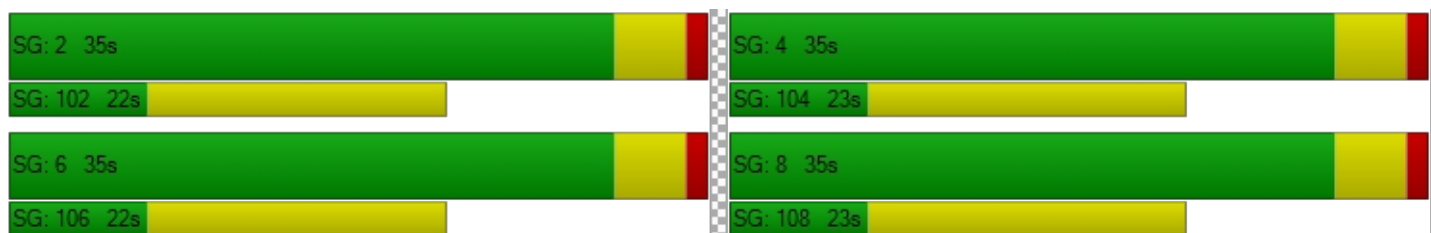
X, volume / capacity	0.10	0.52	0.05	0.15	0.51	0.07	0.15	0.68	0.41	0.70
d, Delay for Lane Group [s/veh]	17.95	11.33	7.07	18.97	11.18	7.24	27.13	21.67	29.19	21.87
Lane Group LOS	B	B	A	B	B	A	C	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.44	4.74	0.25	0.69	4.60	0.41	0.50	5.21	1.52	5.16
50th-Percentile Queue Length [ft]	11.03	118.52	6.36	17.19	115.05	10.24	12.56	130.37	38.10	129.06
95th-Percentile Queue Length [veh]	0.79	8.31	0.46	1.24	8.12	0.74	0.90	8.96	2.74	8.89
95th-Percentile Queue Length [ft]	19.85	207.79	11.45	30.93	203.00	18.44	22.62	224.00	68.58	222.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.95	11.33	7.07	18.97	11.18	7.24	27.13	21.67	21.67	29.19	21.87	21.87
Movement LOS	B	B	A	B	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.43			11.43			22.12			23.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.15											
Intersection LOS	B											
Intersection V/C	0.504											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	515	135	60	497	193	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	515	135	60	497	193	130
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	143	37	16	130	57	39
Total Analysis Volume [veh/h]	572	150	63	519	229	154
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.30	0.10	0.07	0.27	0.13	0.10
s, saturation flow rate [veh/h]	1900	1544	843	1900	1810	1550
c, Capacity [veh/h]	841	684	380	841	428	366
d1, Uniform Delay [s]	6.37	4.93	11.10	6.12	9.57	9.28
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.06	0.08	0.28	0.39	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

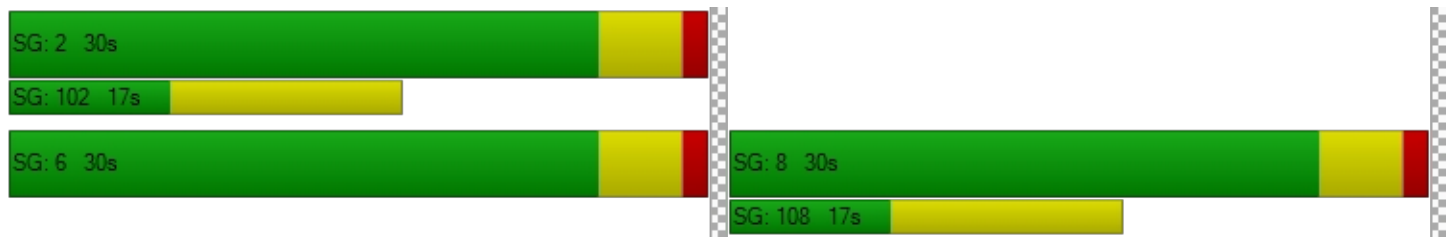
X, volume / capacity	0.68	0.22	0.17	0.62	0.54	0.42
d, Delay for Lane Group [s/veh]	6.73	4.99	11.18	6.40	9.96	9.57
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.34	0.27	0.27	1.16	0.95	0.62
50th-Percentile Queue Length [ft]	33.60	6.67	6.74	29.08	23.67	15.41
95th-Percentile Queue Length [veh]	2.42	0.48	0.49	2.09	1.70	1.11
95th-Percentile Queue Length [ft]	60.48	12.01	12.14	52.34	42.61	27.74

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.73	4.99	11.18	6.40	9.96	9.57
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	6.37		6.92		9.80	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.34					
Intersection LOS	A					
Intersection V/C	0.428					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1100	72	104	990	60	162	365	161	80	274	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1100	72	104	990	60	162	365	161	80	274	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	294	19	29	273	17	44	99	44	26	90	13
Total Analysis Volume [veh/h]	32	1176	77	115	1092	66	176	396	175	105	360	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	32	32	32	32	32
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.41	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.06	0.33	0.05	0.24	0.31	0.31	0.18	0.21	0.11	0.11	0.22
s, saturation flow rate [veh/h]	492	3618	1519	484	1900	1845	980	1900	1552	995	1847
c, Capacity [veh/h]	201	1732	727	192	909	883	289	772	630	307	750
d1, Uniform Delay [s]	25.60	16.09	11.44	32.51	15.68	15.76	30.91	17.80	15.88	27.31	18.15
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	2.17	0.29	13.06	3.48	3.69	2.06	0.53	0.24	0.66	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

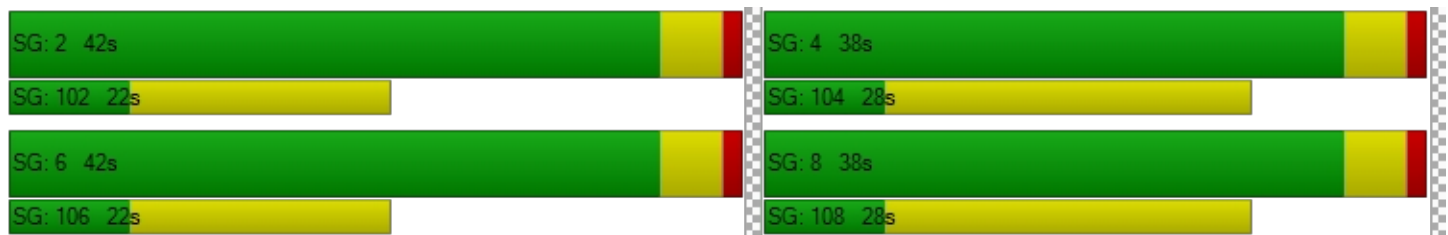
X, volume / capacity	0.16	0.68	0.11	0.60	0.64	0.65	0.61	0.51	0.28	0.34	0.55
d, Delay for Lane Group [s/veh]	27.29	18.26	11.73	45.57	19.16	19.46	32.97	18.33	16.12	27.97	18.78
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.59	8.30	0.78	2.87	8.03	7.96	3.34	5.27	2.07	1.78	5.73
50th-Percentile Queue Length [ft]	14.79	207.40	19.58	71.80	200.68	199.01	83.53	131.65	51.82	44.54	143.28
95th-Percentile Queue Length [veh]	1.06	13.02	1.41	5.17	12.67	12.59	6.01	9.03	3.73	3.21	9.66
95th-Percentile Queue Length [ft]	26.62	325.50	35.24	129.24	316.84	314.69	150.36	225.74	93.28	80.18	241.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.29	18.26	11.73	45.57	19.30	19.46	32.97	18.33	16.12	27.97	18.78	18.78
Movement LOS	C	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.09			21.68			21.26			20.64		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.25											
Intersection LOS	C											
Intersection V/C	0.549											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	37.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↻			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	180	91	165	198	78	62	600	96	24	434	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	180	91	165	198	78	62	600	96	24	434	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	55	28	51	61	24	16	157	25	7	118	8
Total Analysis Volume [veh/h]	24	218	110	203	243	96	65	629	101	26	472	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.34	0.41	0.16	0.07	0.20	0.20	0.04	0.27
s, saturation flow rate [veh/h]	1155	1762	600	600	600	902	1900	1777	734	1869
c, Capacity [veh/h]	91	604	191	206	206	401	1030	963	383	1013
d1, Uniform Delay [s]	39.94	21.20	25.32	26.25	20.54	18.48	10.43	10.48	14.94	11.48
k, delay calibration	0.11	0.11	0.42	0.50	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.52	0.76	76.91	120.33	1.64	0.87	0.99	1.09	0.34	1.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.54	1.06	1.18	0.47	0.16	0.36	0.37	0.07	0.50
d, Delay for Lane Group [s/veh]	41.46	21.96	102.23	146.58	22.18	19.35	11.42	11.57	15.29	13.23
Lane Group LOS	D	C	F	F	C	B	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.50	4.76	7.31	10.47	1.41	0.91	3.67	3.54	0.32	5.53
50th-Percentile Queue Length [ft]	12.42	118.93	182.79	261.73	35.16	22.83	91.73	88.44	7.95	138.26
95th-Percentile Queue Length [veh]	0.89	8.33	12.15	17.29	2.53	1.64	6.60	6.37	0.57	9.39
95th-Percentile Queue Length [ft]	22.35	208.36	303.66	432.19	63.30	41.09	165.12	159.19	14.31	234.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.46	21.96	21.96	102.23	146.58	22.18	19.35	11.48	11.57	15.29	13.23	13.23
Movement LOS	D	C	C	F	F	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	23.29			107.93			12.14			13.33		
Approach LOS	C			F			B			B		
d_I, Intersection Delay [s/veh]	37.58											
Intersection LOS	D											
Intersection V/C	0.675											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.611

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	890	135	183	955	206	50	500	142	112	580	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	890	135	183	955	206	50	500	142	112	580	30
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	244	37	47	246	53	13	132	38	34	175	9
Total Analysis Volume [veh/h]	44	975	148	189	984	212	53	529	150	135	699	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	71	59	59	71	63	63	39	26	26	39	31	31
g / C, Green / Cycle	0.60	0.49	0.49	0.60	0.52	0.52	0.33	0.22	0.22	0.33	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.31	0.27	0.32	0.33	0.06	0.19	0.20	0.13	0.20	0.20
s, saturation flow rate [veh/h]	597	1900	1788	698	1900	1755	842	1900	1675	1063	1900	1846
c, Capacity [veh/h]	330	935	880	388	996	920	291	417	367	294	483	470
d1, Uniform Delay [s]	14.01	22.15	22.30	16.10	20.04	20.31	30.16	44.84	45.40	31.81	41.41	41.53
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.07	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	3.01	3.32	4.34	2.85	3.31	0.11	2.04	5.04	0.42	0.97	1.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

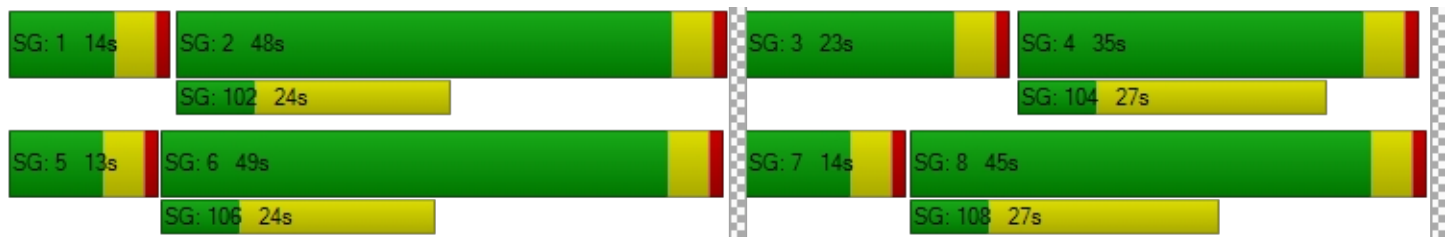
X, volume / capacity	0.13	0.61	0.62	0.49	0.62	0.63	0.18	0.84	0.89	0.46	0.77	0.78
d, Delay for Lane Group [s/veh]	14.85	25.15	25.63	20.44	22.89	23.62	30.27	46.87	50.44	32.23	42.39	42.65
Lane Group LOS	B	C	C	C	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.55	12.31	11.92	2.70	12.52	12.15	1.07	10.22	9.91	2.88	10.24	10.11
50th-Percentile Queue Length [ft]	13.87	307.86	298.01	67.60	313.10	303.65	26.85	255.58	247.82	72.00	255.93	252.73
95th-Percentile Queue Length [veh]	1.00	18.07	17.58	4.87	18.33	17.86	1.93	15.47	15.08	5.18	15.48	15.32
95th-Percentile Queue Length [ft]	24.97	451.73	439.57	121.69	458.19	446.54	48.33	386.67	376.90	129.60	387.11	383.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.85	25.35	25.63	20.44	23.17	23.62	30.27	48.07	50.44	32.23	42.51	42.65
Movement LOS	B	C	C	C	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	24.99			22.86			47.26			40.92		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.54											
Intersection LOS	C											
Intersection V/C	0.611											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	30	402	210	64	498	87	70	544	60	41	819	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	402	210	64	498	87	70	544	60	41	819	40
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	111	58	17	136	24	18	138	15	13	256	13
Total Analysis Volume [veh/h]	33	445	233	70	542	95	71	552	61	51	1024	50
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.04	0.23	0.15	0.07	0.29	0.06	0.13	0.16	0.17	0.06	0.28	0.29
s, saturation flow rate [veh/h]	877	1900	1567	956	1900	1580	533	1900	1817	816	1900	1856
c, Capacity [veh/h]	308	904	745	374	904	752	169	746	714	304	746	729
d1, Uniform Delay [s]	21.31	12.55	11.29	19.38	13.45	10.23	30.97	15.43	15.47	21.20	18.04	18.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.14	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	1.91	1.09	1.11	2.93	0.35	0.62	0.14	0.15	0.10	1.79	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.49	0.31	0.19	0.60	0.13	0.42	0.42	0.42	0.17	0.73	0.73
d, Delay for Lane Group [s/veh]	22.01	14.47	12.39	20.48	16.38	10.58	31.59	15.57	15.62	21.30	19.84	20.03
Lane Group LOS	C	B	B	C	B	B	C	B	B	C	B	C
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	4.59	2.16	0.93	6.10	0.79	1.19	3.36	3.26	0.65	7.13	7.07
50th-Percentile Queue Length [ft]	11.58	114.69	54.02	23.27	152.40	19.67	29.74	83.91	81.50	16.23	178.36	176.68
95th-Percentile Queue Length [veh]	0.83	8.10	3.89	1.68	10.14	1.42	2.14	6.04	5.87	1.17	11.52	11.43
95th-Percentile Queue Length [ft]	20.84	202.50	97.24	41.89	253.62	35.40	53.53	151.04	146.71	29.21	287.88	285.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.01	14.47	12.39	20.48	16.38	10.58	31.59	15.59	15.62	21.30	19.93	20.03
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	C
d_A, Approach Delay [s/veh]	14.14			16.01			17.26			20.00		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.25											
Intersection LOS	B											
Intersection V/C	0.572											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	30	310	80	110	490	180	30	503	50	170	790	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	310	80	110	490	180	30	503	50	170	790	120
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	93	24	31	139	51	8	131	13	45	209	32
Total Analysis Volume [veh/h]	36	372	96	125	556	204	31	523	52	180	834	127
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.05	0.10	0.06	0.12	0.21	0.22	0.05	0.14	0.03	0.20	0.26	0.26
s, saturation flow rate [veh/h]	713	3618	1573	1019	1900	1684	593	3618	1535	881	1900	1798
c, Capacity [veh/h]	337	1775	772	519	932	826	176	1367	580	314	718	679
d1, Uniform Delay [s]	16.65	10.12	9.67	13.99	11.49	11.57	28.37	15.83	14.02	25.44	18.27	18.33
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.08	0.09
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	0.27	0.33	1.10	1.43	1.69	0.18	0.07	0.02	0.62	0.92	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

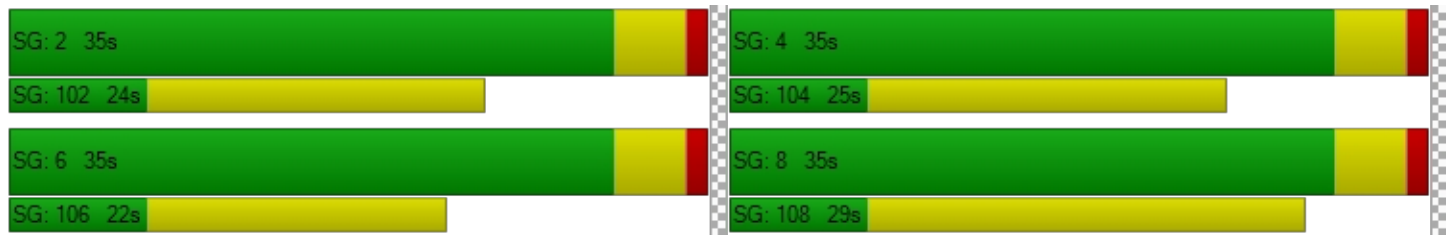
X, volume / capacity	0.11	0.21	0.12	0.24	0.43	0.44	0.18	0.38	0.09	0.57	0.68	0.69
d, Delay for Lane Group [s/veh]	17.28	10.39	10.00	15.08	12.92	13.26	28.55	15.90	14.04	26.05	19.18	19.39
Lane Group LOS	B	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.45	1.57	0.81	1.39	3.90	3.62	0.47	2.83	0.50	2.75	6.30	6.06
50th-Percentile Queue Length [ft]	11.35	39.14	20.26	34.64	97.40	90.50	11.80	70.81	12.51	68.73	157.41	151.60
95th-Percentile Queue Length [veh]	0.82	2.82	1.46	2.49	7.01	6.52	0.85	5.10	0.90	4.95	10.41	10.10
95th-Percentile Queue Length [ft]	20.42	70.46	36.47	62.35	175.33	162.90	21.25	127.46	22.52	123.72	260.29	252.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.28	10.39	10.00	15.08	13.01	13.26	28.55	15.90	14.04	26.05	19.27	19.39
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	10.81			13.36			16.38			20.35		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.08											
Intersection LOS	B											
Intersection V/C	0.476											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.597

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	50	480	70	320	620	60	100	363	200	194	816	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	480	70	320	620	60	100	363	200	194	816	60
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	134	19	84	163	16	27	96	53	60	253	19
Total Analysis Volume [veh/h]	56	534	78	336	652	63	106	385	212	240	1011	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	62	45	45	62	51	51	49	31	31	49	37	37
g / C, Green / Cycle	0.51	0.37	0.37	0.52	0.43	0.43	0.41	0.26	0.26	0.41	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.06	0.16	0.17	0.19	0.19	0.19	0.14	0.17	0.18	0.21	0.29	0.29
s, saturation flow rate [veh/h]	902	1900	1799	1755	1900	1828	777	1900	1594	1149	1900	1848
c, Capacity [veh/h]	448	708	671	909	810	779	257	490	411	423	589	573
d1, Uniform Delay [s]	15.90	28.25	28.33	17.25	24.41	24.46	28.32	39.65	40.14	26.59	40.17	40.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.44	0.04	0.04	0.05	0.22	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	1.99	2.15	1.16	1.79	1.89	4.22	0.53	0.76	0.51	13.02	14.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.44	0.45	0.37	0.45	0.45	0.41	0.64	0.68	0.57	0.93	0.94
d, Delay for Lane Group [s/veh]	16.48	30.24	30.48	18.40	26.20	26.34	32.54	40.18	40.90	27.11	53.19	54.58
Lane Group LOS	B	C	C	B	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.92	7.62	7.36	6.32	8.28	8.06	2.21	8.35	7.55	4.75	17.64	17.50
50th-Percentile Queue Length [ft]	22.92	190.54	184.07	158.11	207.09	201.59	55.25	208.77	188.77	118.77	440.89	437.53
95th-Percentile Queue Length [veh]	1.65	12.15	11.81	10.45	13.00	12.72	3.98	13.09	12.06	8.33	24.52	24.36
95th-Percentile Queue Length [ft]	41.25	303.73	295.32	261.22	325.09	318.02	99.44	327.25	301.44	208.13	613.06	609.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.48	30.34	30.48	18.40	26.26	26.34	32.54	40.31	40.90	27.11	53.83	54.58
Movement LOS	B	C	C	B	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	29.19			23.76			39.31			49.03		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.58											
Intersection LOS	D											
Intersection V/C	0.597											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	360	420	0	593	864	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	360	420	0	593	864	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	113	0	161	237	0
Total Analysis Volume [veh/h]	386	450	0	646	950	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.21	0.28	0.18	0.26
s, saturation flow rate [veh/h]	1810	1615	3618	3618
c, Capacity [veh/h]	511	456	2226	2226
d1, Uniform Delay [s]	29.40	32.07	8.09	9.01
k, delay calibration	0.21	0.40	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	34.81	0.33	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

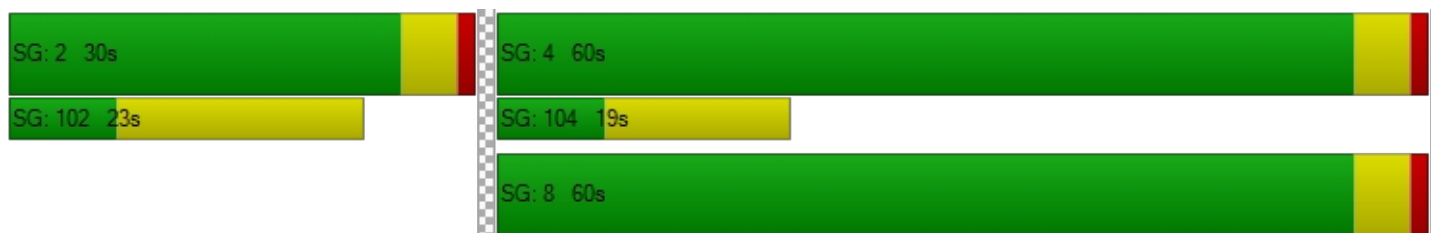
X, volume / capacity	0.76	0.99	0.29	0.43
d, Delay for Lane Group [s/veh]	33.80	66.88	8.42	9.61
Lane Group LOS	C	E	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	7.45	13.08	2.74	4.51
50th-Percentile Queue Length [ft]	186.14	327.02	68.60	112.85
95th-Percentile Queue Length [veh]	11.92	19.01	4.94	8.00
95th-Percentile Queue Length [ft]	298.01	475.30	123.49	199.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.80	66.88	0.00	8.42	9.61	0.00
Movement LOS	C	E		A	A	
d_A, Approach Delay [s/veh]	51.60		8.42		9.61	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	23.73					
Intersection LOS	C					
Intersection V/C	0.541					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	50	100	80	10	30	30	20	473	20	18	1244	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	100	80	10	30	30	20	473	20	18	1244	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	34	27	3	10	10	6	132	6	5	340	19
Total Analysis Volume [veh/h]	67	135	108	14	41	41	22	528	22	18	1358	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62	62	62	62
g / C, Green / Cycle	0.21	0.21	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.06	0.15	0.15	0.38	0.39
s, saturation flow rate [veh/h]	1683	1607	379	1900	1873	1900	1858
c, Capacity [veh/h]	398	379	257	1311	1292	1311	1282
d1, Uniform Delay [s]	34.36	29.84	13.52	5.05	5.05	6.93	7.02
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	0.13	0.65	0.37	0.37	1.64	1.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

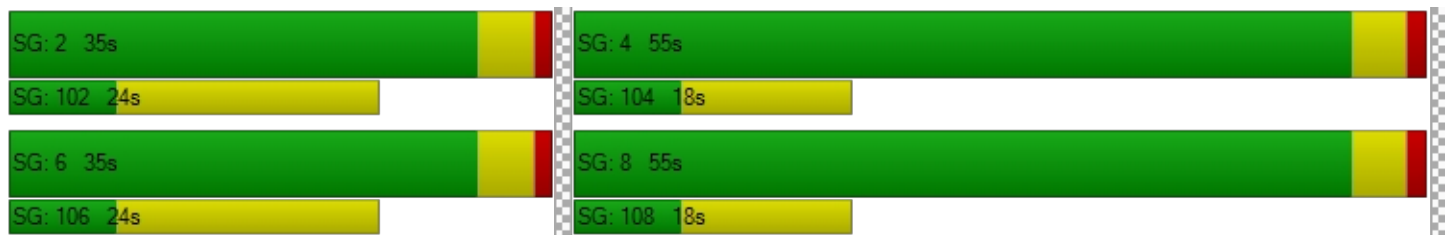
X, volume / capacity	0.78	0.25	0.09	0.21	0.21	0.55	0.56
d, Delay for Lane Group [s/veh]	35.66	29.97	14.18	5.42	5.42	8.57	8.79
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.46	1.71	0.29	1.71	1.69	6.20	6.31
50th-Percentile Queue Length [ft]	161.49	42.67	7.25	42.73	42.30	155.07	157.75
95th-Percentile Queue Length [veh]	10.63	3.07	0.52	3.08	3.05	10.29	10.43
95th-Percentile Queue Length [ft]	265.69	76.81	13.05	76.91	76.14	257.18	260.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.66	35.66	35.66	29.97	29.97	29.97	14.18	5.42	5.42	0.00	8.67	8.79
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.66			29.97			5.76			8.68		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	12.30											
Intersection LOS	B											
Intersection V/C	0.570											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	99.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	70	900	128	90	810	240	32	213	50	510	484	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	900	128	90	810	240	32	213	50	510	484	170
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	239	34	23	205	61	9	59	14	141	134	47
Total Analysis Volume [veh/h]	74	956	136	91	818	242	36	238	56	565	536	188
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	31	22	22	31	22	22	24	24	24	49	49	59
g / C, Green / Cycle	0.35	0.25	0.25	0.35	0.24	0.24	0.27	0.27	0.27	0.55	0.55	0.66
(v / s)_i Volume / Saturation Flow Rate	0.09	0.29	0.32	0.11	0.29	0.32	0.04	0.08	0.08	0.39	0.28	0.12
s, saturation flow rate [veh/h]	861	1900	1693	821	1900	1592	873	1900	1704	1431	1900	1556
c, Capacity [veh/h]	292	467	417	278	453	380	144	517	463	834	1043	1026
d1, Uniform Delay [s]	22.81	33.96	33.96	23.22	34.29	34.29	40.29	25.92	26.09	13.70	12.75	5.95
k, delay calibration	0.50	0.50	0.50	0.10	0.50	0.50	0.04	0.04	0.04	0.20	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.09	106.27	144.63	0.64	115.41	170.30	0.33	0.11	0.14	1.77	0.15	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

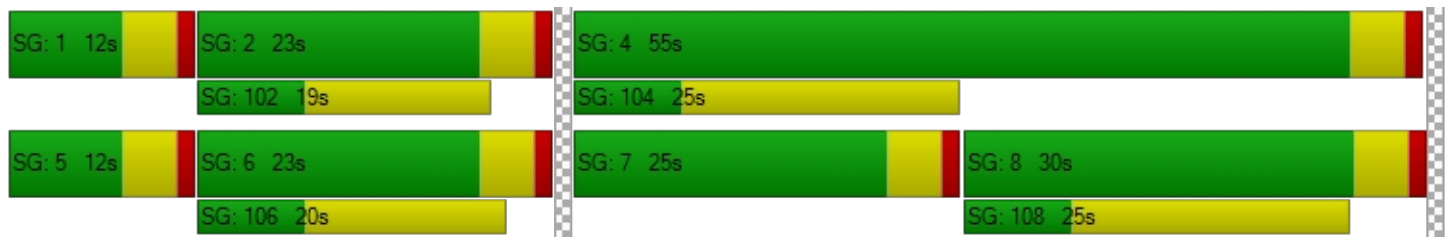
X, volume / capacity	0.25	1.19	1.28	0.33	1.21	1.34	0.25	0.29	0.31	0.68	0.51	0.18
d, Delay for Lane Group [s/veh]	24.90	140.23	178.59	23.86	149.70	204.59	40.62	26.04	26.23	15.47	12.90	5.98
Lane Group LOS	C	F	F	C	F	F	D	C	C	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.18	23.54	25.42	1.31	24.01	25.91	0.77	2.48	2.40	7.32	6.32	1.22
50th-Percentile Queue Length [ft]	29.62	588.61	635.59	32.77	600.20	647.64	19.18	61.88	60.01	182.88	157.96	30.46
95th-Percentile Queue Length [veh]	2.13	34.71	38.37	2.36	35.58	39.65	1.38	4.46	4.32	11.75	10.44	2.19
95th-Percentile Queue Length [ft]	53.31	867.79	959.30	58.99	889.39	991.30	34.52	111.38	108.02	293.77	261.02	54.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.90	156.22	178.59	23.86	167.64	204.59	40.62	26.11	26.23	15.47	12.90	5.98
Movement LOS	C	F	F	C	F	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	150.49			164.05			27.71			13.02		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	99.14											
Intersection LOS	F											
Intersection V/C	0.658											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1218	64	55	1092	60	72	123	68	60	62	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1218	64	55	1092	60	72	123	68	60	62	60
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	315	17	14	284	16	22	38	21	19	19	19
Total Analysis Volume [veh/h]	62	1261	66	57	1137	62	88	150	83	75	77	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.13	0.35	0.36	0.14	0.32	0.32	0.22	0.18
s, saturation flow rate [veh/h]	474	1900	1852	420	1900	1852	1470	1248
c, Capacity [veh/h]	289	1179	1150	254	1179	1150	446	390
d1, Uniform Delay [s]	15.50	8.87	8.93	17.23	8.44	8.47	27.56	25.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	1.98	2.08	2.05	1.59	1.66	0.83	0.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

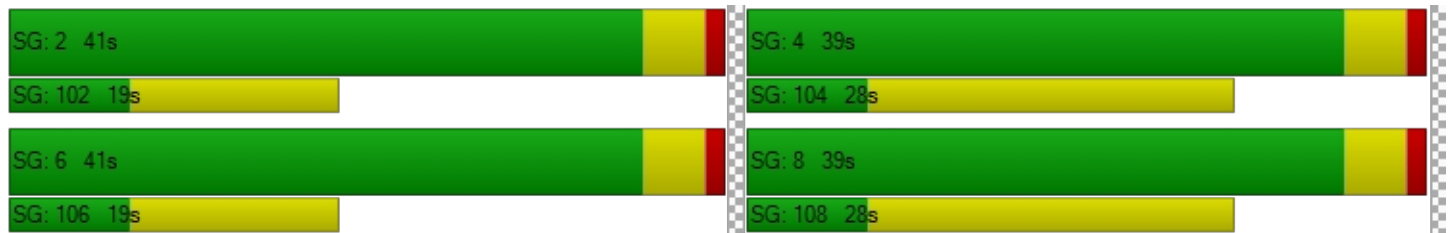
X, volume / capacity	0.21	0.57	0.57	0.22	0.51	0.52	0.72	0.58
d, Delay for Lane Group [s/veh]	17.20	10.85	11.00	19.28	10.03	10.13	28.38	26.11
Lane Group LOS	B	B	B	B	B	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.84	6.14	6.11	0.83	5.25	5.20	5.58	3.66
50th-Percentile Queue Length [ft]	20.88	153.50	152.79	20.85	131.16	129.92	139.46	91.39
95th-Percentile Queue Length [veh]	1.50	10.20	10.17	1.50	9.00	8.94	9.45	6.58
95th-Percentile Queue Length [ft]	37.58	255.10	254.15	37.54	225.07	223.38	236.30	164.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.20	10.92	11.00	19.28	10.08	10.13	28.38	28.38	28.38	26.11	26.11	26.11
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.21			10.50			28.38			26.11		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.71											
Intersection LOS	B											
Intersection V/C	0.574											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	84	1304	52	1	1333	217	72	68	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	84	1304	52	1	1333	217	72	68	91
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	22	336	13	0	351	57	21	22	27
Total Analysis Volume [veh/h]	0	0	0	86	1343	54	1	1403	228	84	89	106
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0	
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0	
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	C	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		97	97	97	97	97	97	13	13
g / C, Green / Cycle		0.81	0.81	0.81	0.81	0.81	0.81	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate		0.27	0.37	0.37	0.00	0.43	0.45	0.09	0.07
s, saturation flow rate [veh/h]		313	1900	1869	392	1900	1796	1855	1483
c, Capacity [veh/h]		261	1545	1520	327	1545	1461	204	163
d1, Uniform Delay [s]		10.72	3.31	3.32	6.13	3.69	3.78	52.34	51.11
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.37	0.97	0.99	0.02	1.33	1.50	3.79	1.64
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.33	0.45	0.46	0.00	0.53	0.55	0.85	0.65
d, Delay for Lane Group [s/veh]		14.09	4.27	4.31	6.14	5.02	5.28	56.13	52.75
Lane Group LOS		B	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		1.32	4.13	4.11	0.01	5.78	5.80	5.28	3.10
50th-Percentile Queue Length [ft]		33.11	103.22	102.78	0.24	144.53	145.02	131.89	77.56
95th-Percentile Queue Length [veh]		2.38	7.43	7.40	0.02	9.72	9.75	9.04	5.58
95th-Percentile Queue Length [ft]		59.60	185.80	185.00	0.43	243.12	243.77	226.06	139.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	14.09	4.29	4.31	6.14	5.13	5.28	56.13	56.13	52.75
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			4.86			5.15			54.85		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	9.11											
Intersection LOS	A											
Intersection V/C	0.541											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1150	170	144	1050	20	140	10	122	10	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1150	170	144	1050	20	140	10	122	10	0	0
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	293	43	37	273	5	40	3	35	4	0	0
Total Analysis Volume [veh/h]	10	1172	173	150	1091	21	159	11	138	15	0	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	90	90	90	13	13	3
g / C, Green / Cycle	0.65	0.65	0.75	0.75	0.75	0.11	0.11	0.02
(v / s)_j Volume / Saturation Flow Rate	0.38	0.39	0.27	0.29	0.29	0.09	0.09	0.01
s, saturation flow rate [veh/h]	1874	1621	561	1900	1886	1815	1547	1810
c, Capacity [veh/h]	1256	1060	415	1426	1415	202	172	42
d1, Uniform Delay [s]	11.56	11.83	9.18	5.29	5.29	52.26	52.00	57.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.90	2.52	2.43	0.81	0.82	3.62	3.27	1.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

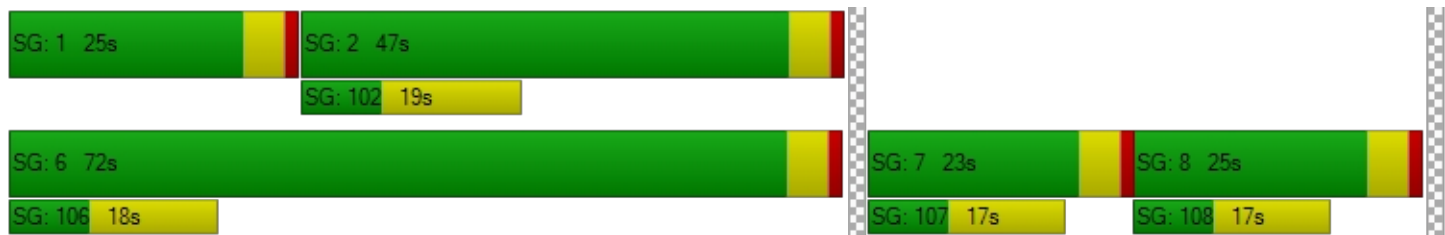
X, volume / capacity	0.57	0.60	0.36	0.39	0.39	0.84	0.80	0.36
d, Delay for Lane Group [s/veh]	13.46	14.35	11.61	6.10	6.11	55.88	55.27	59.56
Lane Group LOS	B	B	B	A	A	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	10.40	9.55	1.13	4.43	4.40	5.26	4.24	0.47
50th-Percentile Queue Length [ft]	259.89	238.74	28.28	110.65	110.11	131.49	106.02	11.68
95th-Percentile Queue Length [veh]	15.68	14.62	2.04	7.88	7.85	9.02	7.62	0.84
95th-Percentile Queue Length [ft]	392.08	365.43	50.90	196.91	196.15	225.51	190.45	21.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.46	13.81	14.35	11.61	6.10	6.11	55.88	55.88	55.27	59.56	59.56	59.56
Movement LOS	B	B	B	B	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	13.88			6.76			55.61			59.56		
Approach LOS	B			A			E			E		
d_I, Intersection Delay [s/veh]	15.43											
Intersection LOS	B											
Intersection V/C	0.522											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	530	90	221	680	20	120	293	86	30	254	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	530	90	221	680	20	120	293	86	30	254	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	147	25	59	183	5	34	83	24	9	73	3
Total Analysis Volume [veh/h]	0	589	100	238	732	22	135	330	97	35	293	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	54	54	27	27	27	27	27
g / C, Green / Cycle	0.47	0.60	0.60	0.30	0.30	0.30	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.37	0.25	0.40	0.12	0.23	0.04	0.15	0.01
s, saturation flow rate [veh/h]	1838	962	1888	1100	1818	976	1900	1549
c, Capacity [veh/h]	858	452	1136	242	538	138	563	459
d1, Uniform Delay [s]	20.48	15.02	11.89	37.31	29.14	41.26	26.36	22.47
k, delay calibration	0.50	0.50	0.50	0.04	0.17	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.86	4.35	3.07	0.75	4.17	0.35	0.28	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

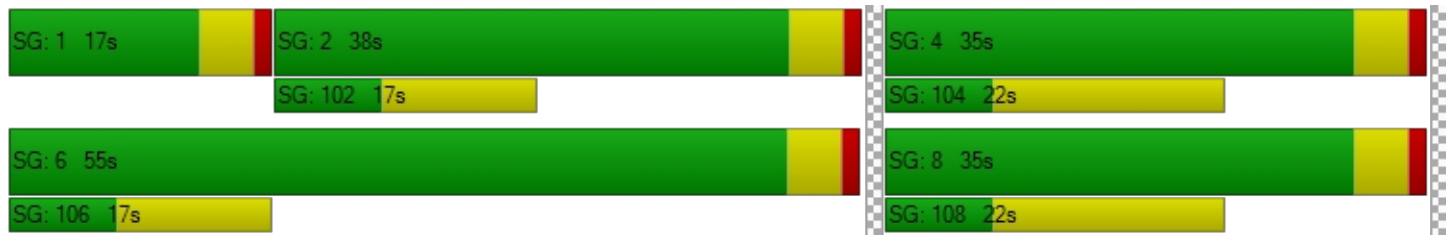
X, volume / capacity	0.80	0.53	0.66	0.56	0.79	0.25	0.52	0.03
d, Delay for Lane Group [s/veh]	28.34	19.37	14.96	38.06	33.31	41.62	26.64	22.48
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	13.13	2.36	9.27	2.89	8.84	0.77	5.22	0.18
50th-Percentile Queue Length [ft]	328.15	58.94	231.71	72.22	220.97	19.27	130.54	4.55
95th-Percentile Queue Length [veh]	19.07	4.24	14.26	5.20	13.71	1.39	8.97	0.33
95th-Percentile Queue Length [ft]	476.70	106.10	356.54	130.00	342.87	34.68	224.23	8.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	28.34	28.34	19.37	14.96	14.96	38.06	33.31	33.31	41.62	26.64	22.48
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		28.34		16.01			34.45			28.04		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]	24.90											
Intersection LOS	C											
Intersection V/C	0.677											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.368

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	615	547	10	10	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	615	547	10	10	20
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	161	149	3	4	8
Total Analysis Volume [veh/h]	21	645	596	11	16	31
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	2
g / C, Green / Cycle	0.47	0.47	0.47	0.08
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.32	0.03
s, saturation flow rate [veh/h]	824	1900	1893	1676
c, Capacity [veh/h]	460	889	886	145
d1, Uniform Delay [s]	7.92	4.43	4.30	8.86
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.35	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

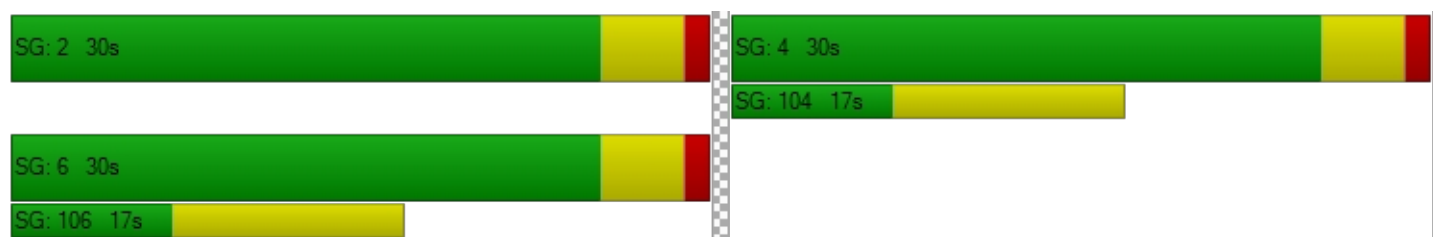
X, volume / capacity	0.05	0.73	0.69	0.32
d, Delay for Lane Group [s/veh]	7.93	4.86	4.66	9.34
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.47	0.42	0.12
50th-Percentile Queue Length [ft]	1.28	11.82	10.57	3.08
95th-Percentile Queue Length [veh]	0.09	0.85	0.76	0.22
95th-Percentile Queue Length [ft]	2.30	21.27	19.03	5.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.93	4.86	4.66	4.66	9.34	9.34
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.95		4.66		9.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.97					
Intersection LOS	A					
Intersection V/C	0.368					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	1087	425	100	1071	571	135
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1087	425	100	1071	571	135
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	290	113	28	295	168	40
Total Analysis Volume [veh/h]	1160	454	110	1179	671	159
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	72	72	9	85	25	25
g / C, Green / Cycle	0.60	0.60	0.08	0.71	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.42	0.47	0.06	0.33	0.19	0.10
s, saturation flow rate [veh/h]	1900	1717	1810	3618	3514	1549
c, Capacity [veh/h]	1138	1028	136	2576	742	327
d1, Uniform Delay [s]	16.77	18.20	54.61	7.37	46.11	41.57
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.75	6.02	4.34	0.59	1.77	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.71	0.78	0.81	0.46	0.90	0.49
d, Delay for Lane Group [s/veh]	20.52	24.22	58.95	7.95	47.88	41.99
Lane Group LOS	C	C	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	16.22	18.04	3.43	6.08	9.88	4.18
50th-Percentile Queue Length [ft]	405.55	450.98	85.87	152.04	247.05	104.56
95th-Percentile Queue Length [veh]	22.83	25.00	6.18	10.13	15.04	7.53
95th-Percentile Queue Length [ft]	570.68	625.12	154.57	253.15	375.94	188.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.65	24.22	58.95	7.95	47.88	41.99
Movement LOS	C	C	E	A	D	D
d_A, Approach Delay [s/veh]	22.37		12.31		46.75	
Approach LOS	C		B		D	
d_I, Intersection Delay [s/veh]	24.32					
Intersection LOS	C					
Intersection V/C	0.722					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	22	391	79	80	304	20	256	757	100	20	505	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	391	79	80	304	20	256	757	100	20	505	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	110	22	24	91	6	74	220	29	6	153	3
Total Analysis Volume [veh/h]	25	442	89	96	364	24	298	880	116	24	612	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.02	0.23	0.06	0.10	0.19	0.02	0.26	0.27	0.28	0.04	0.16	0.17
s, saturation flow rate [veh/h]	1027	1900	1538	953	1900	1566	1151	1900	1777	570	1900	1875
c, Capacity [veh/h]	390	840	680	333	840	692	522	812	759	106	482	476
d1, Uniform Delay [s]	18.69	14.26	11.61	22.47	13.53	11.11	15.08	15.73	15.90	35.10	23.42	23.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.09	0.11	0.13	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	2.36	0.40	2.18	1.63	0.09	0.85	0.80	1.07	0.40	0.55	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

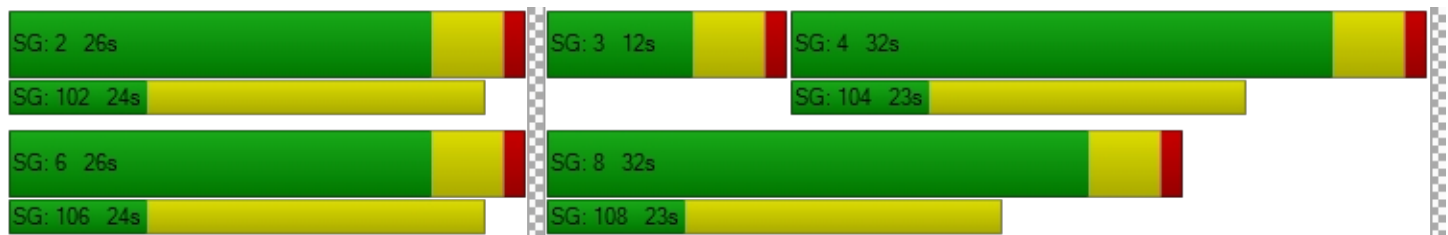
X, volume / capacity	0.06	0.53	0.13	0.29	0.43	0.03	0.57	0.62	0.64	0.23	0.65	0.65
d, Delay for Lane Group [s/veh]	19.00	16.62	12.01	24.64	15.17	11.21	15.93	16.53	16.97	35.50	23.97	24.02
Lane Group LOS	B	B	B	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.31	5.02	0.81	1.45	3.87	0.21	3.08	5.91	5.81	0.41	4.44	4.42
50th-Percentile Queue Length [ft]	7.85	125.43	20.20	36.16	96.81	5.17	76.99	147.83	145.34	10.25	110.90	110.44
95th-Percentile Queue Length [veh]	0.57	8.69	1.45	2.60	6.97	0.37	5.54	9.90	9.77	0.74	7.89	7.86
95th-Percentile Queue Length [ft]	14.14	217.26	36.36	65.09	174.26	9.31	138.58	247.53	244.19	18.45	197.26	196.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.00	16.62	12.01	24.64	15.17	11.21	15.93	16.72	16.97	35.50	23.99	24.02
Movement LOS	B	B	B	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	15.99			16.85			16.56			24.42		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.517											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	30	350	260	210	510	158	280	879	90	42	626	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	350	260	210	510	158	280	879	90	42	626	20
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	102	76	60	147	45	78	244	25	12	176	6
Total Analysis Volume [veh/h]	35	408	303	242	587	182	311	976	100	47	703	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	22	58	14	31	31	12	60	79	6	53	53
g / C, Green / Cycle	0.04	0.18	0.48	0.12	0.26	0.26	0.10	0.50	0.66	0.05	0.44	0.44
(v / s)_j Volume / Saturation Flow Rate	0.02	0.11	0.19	0.09	0.21	0.21	0.09	0.27	0.06	0.03	0.19	0.19
s, saturation flow rate [veh/h]	1810	3618	1565	2796	1900	1717	3514	3618	1573	1810	1900	1875
c, Capacity [veh/h]	73	662	754	343	496	448	365	1804	1032	84	838	827
d1, Uniform Delay [s]	56.31	45.13	19.96	53.05	41.50	41.70	52.84	20.64	7.60	55.99	23.17	23.18
k, delay calibration	0.04	0.04	0.12	0.04	0.06	0.07	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	0.35	0.40	1.00	1.78	2.45	2.21	1.17	0.02	2.16	1.64	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.48	0.62	0.40	0.71	0.81	0.82	0.85	0.54	0.10	0.56	0.43	0.44
d, Delay for Lane Group [s/veh]	58.10	45.48	20.35	54.06	43.29	44.15	55.05	21.81	7.61	58.15	24.80	24.85
Lane Group LOS	E	D	C	D	D	D	E	C	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.08	5.63	5.48	3.63	11.27	10.50	4.72	9.54	0.92	1.44	7.48	7.41
50th-Percentile Queue Length [ft]	26.88	140.76	137.11	90.80	281.79	262.43	117.91	238.40	23.03	36.12	186.94	185.31
95th-Percentile Queue Length [veh]	1.94	9.52	9.33	6.54	16.78	15.81	8.28	14.60	1.66	2.60	11.96	11.88
95th-Percentile Queue Length [ft]	48.38	238.05	233.13	163.44	419.44	395.27	206.95	365.01	41.46	65.02	299.06	296.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.10	45.48	20.35	54.06	43.56	44.15	55.05	21.81	7.61	58.15	24.83	24.85
Movement LOS	E	D	C	D	D	D	E	C	A	E	C	C
d_A, Approach Delay [s/veh]	35.87			46.18			28.24			26.86		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.05											
Intersection LOS	C											
Intersection V/C	0.581											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	60.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.841

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	670	84	490	1260	52	100	1098	20	139	957	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	670	84	490	1260	52	100	1098	20	139	957	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	188	24	125	322	13	30	325	6	38	260	16
Total Analysis Volume [veh/h]	67	750	94	501	1288	53	118	1299	24	151	1040	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	36	36	15	46	46	6	43	43	7	44	44
g / C, Green / Cycle	0.05	0.30	0.30	0.13	0.38	0.38	0.05	0.36	0.36	0.06	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.21	0.06	0.14	0.36	0.03	0.03	0.24	0.24	0.04	0.41	0.41
s, saturation flow rate [veh/h]	1810	3618	1536	3514	3618	1543	3514	3618	1874	3514	1800	900
c, Capacity [veh/h]	87	1088	462	451	1379	588	175	1296	671	208	662	331
d1, Uniform Delay [s]	56.47	36.99	31.24	52.28	35.65	23.78	56.05	32.54	32.58	55.45	37.92	37.92
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	1.12	0.31	52.81	4.87	0.09	1.71	2.79	5.36	1.79	67.51	88.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

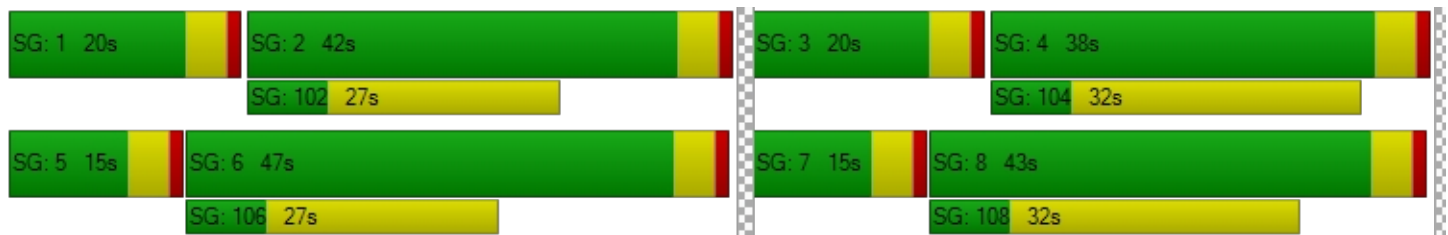
X, volume / capacity	0.77	0.69	0.20	1.11	0.93	0.09	0.68	0.67	0.67	0.72	1.11	1.13
d, Delay for Lane Group [s/veh]	61.89	38.11	31.54	105.09	40.52	23.87	57.75	35.32	37.95	57.25	105.43	126.37
Lane Group LOS	E	D	C	F	D	C	E	D	D	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	10.46	2.22	9.90	17.97	0.95	1.80	11.11	12.06	2.30	15.74	17.66
50th-Percentile Queue Length [ft]	55.78	261.39	55.41	247.58	449.17	23.75	44.98	277.82	301.46	57.45	393.41	441.55
95th-Percentile Queue Length [veh]	4.02	15.76	3.99	15.74	24.92	1.71	3.24	16.58	17.75	4.14	23.70	26.48
95th-Percentile Queue Length [ft]	100.41	393.96	99.73	393.46	622.96	42.76	80.96	414.50	443.83	103.40	592.39	662.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	38.11	31.54	105.09	40.52	23.87	57.75	36.19	37.95	57.25	111.64	126.37
Movement LOS	E	D	C	F	D	C	E	D	D	E	F	F
d_A, Approach Delay [s/veh]	39.19			57.60			37.99			105.86		
Approach LOS	D			E			D			F		
d_I, Intersection Delay [s/veh]	60.46											
Intersection LOS	E											
Intersection V/C	0.841											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	10	190	70	10	60	50	1448	10	20	1521	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	10	190	70	10	60	50	1448	10	20	1521	20
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	4	68	23	3	20	13	370	3	5	400	5
Total Analysis Volume [veh/h]	86	14	273	92	13	79	51	1480	10	21	1600	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	23	6	80	80	4	78	78
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.05	0.67	0.67	0.03	0.65	0.65
(v / s)_j Volume / Saturation Flow Rate	0.07	0.01	0.17	0.07	0.06	0.03	0.27	0.27	0.01	0.59	0.62
s, saturation flow rate [veh/h]	1317	1900	1571	1404	1617	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	223	360	297	293	306	87	2408	1260	54	1165	583
d1, Uniform Delay [s]	49.17	39.65	47.63	44.58	41.73	55.82	9.18	9.18	57.01	18.24	19.47
k, delay calibration	0.04	0.04	0.08	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.02	9.11	0.61	0.54	2.31	0.51	0.97	1.68	12.44	27.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.04	0.92	0.31	0.30	0.59	0.41	0.41	0.39	0.91	0.95
d, Delay for Lane Group [s/veh]	49.57	39.66	56.74	45.19	42.27	58.14	9.69	10.15	58.69	30.69	46.99
Lane Group LOS	D	D	E	D	D	E	A	B	E	C	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.42	0.34	8.64	2.48	2.37	1.57	5.70	6.13	0.65	13.58	17.33
50th-Percentile Queue Length [ft]	60.53	8.46	215.99	61.90	59.37	39.21	142.58	153.32	16.26	339.42	433.32
95th-Percentile Queue Length [veh]	4.36	0.61	13.46	4.46	4.27	2.82	9.62	10.19	1.17	19.62	24.16
95th-Percentile Queue Length [ft]	108.96	15.22	336.50	111.42	106.87	70.58	240.49	254.86	29.27	490.49	604.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.57	39.66	56.74	45.19	42.27	42.27	58.14	9.85	10.15	58.69	36.14	46.99
Movement LOS	D	D	E	D	D	D	E	A	B	E	D	D
d_A, Approach Delay [s/veh]	54.45			43.73			11.45			36.56		
Approach LOS	D			D			B			D		
d_I, Intersection Delay [s/veh]	28.35											
Intersection LOS	C											
Intersection V/C	0.819											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.942

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	590	1251	327	0	0	1861
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	590	1251	327	0	0	1861
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	323	87	0	0	499
Total Analysis Volume [veh/h]	609	1290	348	0	0	1998
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	26	95	16	85
g / C, Green / Cycle	0.22	0.79	0.13	0.71
(v / s)_j Volume / Saturation Flow Rate	0.17	0.46	0.10	0.77
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	758	2229	482	1840
d1, Uniform Delay [s]	44.64	4.87	49.85	17.53
k, delay calibration	0.04	0.34	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.77	0.76	0.77	48.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

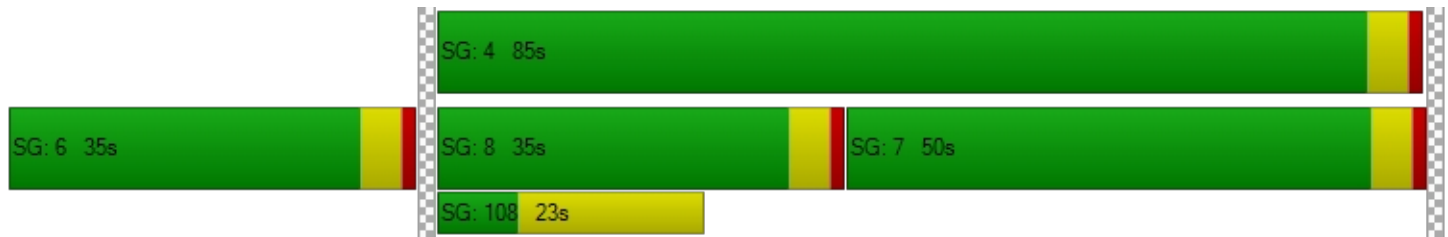
X, volume / capacity	0.80	0.58	0.72	1.09
d, Delay for Lane Group [s/veh]	45.41	5.63	50.63	66.04
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	8.23	3.77	5.06	16.97
50th-Percentile Queue Length [ft]	205.84	94.33	126.44	424.31
95th-Percentile Queue Length [veh]	12.94	6.79	8.75	25.34
95th-Percentile Queue Length [ft]	323.48	169.79	218.65	633.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.41	5.63	50.63	0.00	0.00	66.04
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	18.39		50.63		66.04	
Approach LOS	B		D		E	
d_I, Intersection Delay [s/veh]	43.46					
Intersection LOS	D					
Intersection V/C	0.942					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	46.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.047

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	50	0	0	0	0	327	210	992	1469	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	50	0	0	0	0	327	210	992	1469	0
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	14	0	0	0	0	100	64	264	392	0
Total Analysis Volume [veh/h]	0	0	58	0	0	0	0	400	257	1058	1566	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			22	22	89	115	115
g / C, Green / Cycle			0.19	0.19	0.74	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.11	0.17	0.88	0.41	0.41
s, saturation flow rate [veh/h]			3618	1557	1200	1900	1900
c, Capacity [veh/h]			670	289	886	1827	1827
d1, Uniform Delay [s]			44.74	47.66	15.71	0.15	0.15
k, delay calibration			0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.32	3.78	98.69	0.74	0.74
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity			0.60	0.89	1.19	0.43	0.43
d, Delay for Lane Group [s/veh]			45.06	51.44	114.40	0.89	0.89
Lane Group LOS			D	D	F	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			5.48	7.77	22.03	0.37	0.37
50th-Percentile Queue Length [ft]			137.10	194.22	550.66	9.35	9.35
95th-Percentile Queue Length [veh]			9.32	12.34	34.07	0.67	0.67
95th-Percentile Queue Length [ft]			233.11	308.49	851.63	16.83	16.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.06	51.44	114.40	0.89	0.89
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			47.55			46.66		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	46.83											
Intersection LOS	D											
Intersection V/C	1.047											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	50	40	20	30	30	20	527	23	60	1319	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	50	40	20	30	30	20	527	23	60	1319	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	16	13	7	11	11	6	152	6	16	350	0
Total Analysis Volume [veh/h]	19	65	52	29	44	44	23	610	24	64	1402	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	93	93	93	93
g / C, Green / Cycle	0.15	0.15	0.77	0.77	0.77	0.77
(v / s)_i Volume / Saturation Flow Rate	0.07	0.09	0.19	0.19	0.43	0.42
s, saturation flow rate [veh/h]	1684	1232	1582	1729	1752	1729
c, Capacity [veh/h]	251	221	1257	1339	1389	1339
d1, Uniform Delay [s]	46.67	47.66	3.64	3.76	5.02	5.23
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.50	0.73	0.46	0.43	1.49	1.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

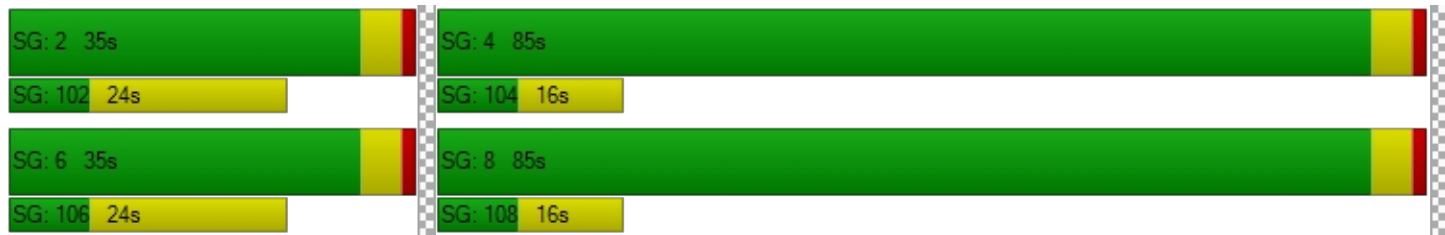
X, volume / capacity	0.47	0.53	0.24	0.24	0.54	0.54
d, Delay for Lane Group [s/veh]	47.17	48.39	4.09	4.20	6.51	6.79
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.21	3.37	1.85	2.04	6.26	6.32
50th-Percentile Queue Length [ft]	80.21	84.16	46.24	50.91	156.54	157.93
95th-Percentile Queue Length [veh]	5.78	6.06	3.33	3.67	10.37	10.44
95th-Percentile Queue Length [ft]	144.38	151.48	83.23	91.64	259.14	260.97

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.17	47.17	48.39	48.39	48.39	4.09	4.15	0.00	6.51	6.65	6.79
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		47.17		48.39			4.15			6.65		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	10.09											
Intersection LOS	B											
Intersection V/C	0.520											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	282	950	20	30	640	88	30	157	20	335	391	614
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	282	950	20	30	640	88	30	157	20	335	391	614
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	245	5	8	172	24	9	46	6	88	103	162
Total Analysis Volume [veh/h]	291	979	21	32	689	95	35	185	24	354	413	649
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	59	59	3	29	29	27	27	27	44	44	82
g / C, Green / Cycle	0.27	0.49	0.49	0.03	0.24	0.24	0.23	0.23	0.23	0.37	0.37	0.68
(v / s)_j Volume / Saturation Flow Rate	0.08	0.26	0.27	0.02	0.21	0.22	0.04	0.10	0.02	0.25	0.22	0.41
s, saturation flow rate [veh/h]	3514	1900	1879	1810	1900	1779	981	1900	1508	1418	1900	1578
c, Capacity [veh/h]	964	927	917	50	458	428	95	433	344	512	702	1077
d1, Uniform Delay [s]	34.43	21.39	21.43	57.72	43.78	44.07	57.81	39.62	36.34	32.00	30.45	10.28
k, delay calibration	0.50	0.50	0.50	0.04	0.28	0.30	0.04	0.04	0.04	0.17	0.09	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	2.27	2.31	4.95	12.70	16.21	0.88	0.25	0.03	2.56	0.66	2.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

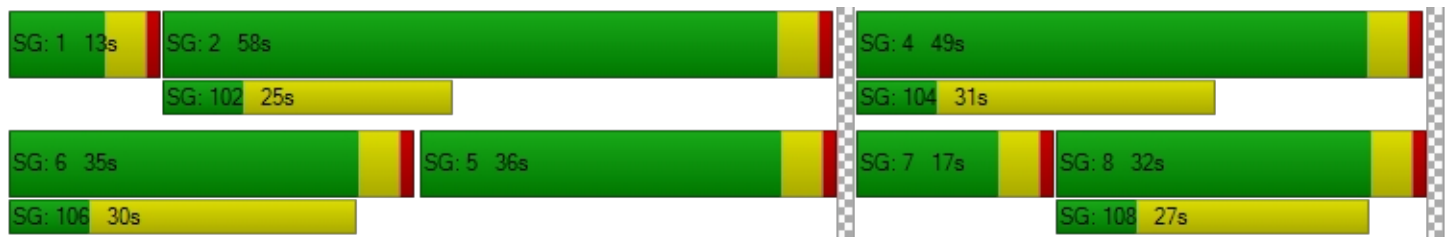
X, volume / capacity	0.30	0.54	0.54	0.64	0.87	0.90	0.37	0.43	0.07	0.69	0.59	0.60
d, Delay for Lane Group [s/veh]	35.23	23.66	23.74	62.68	56.48	60.28	58.68	39.87	36.37	34.56	31.11	12.77
Lane Group LOS	D	C	C	E	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.45	10.10	10.06	1.02	12.86	12.79	1.08	4.67	0.55	8.34	9.69	9.24
50th-Percentile Queue Length [ft]	86.28	252.53	251.45	25.58	321.54	319.72	26.90	116.63	13.86	208.48	242.26	230.92
95th-Percentile Queue Length [veh]	6.21	15.31	15.26	1.84	18.74	18.65	1.94	8.21	1.00	13.08	14.80	14.22
95th-Percentile Queue Length [ft]	155.31	382.84	381.48	46.05	468.58	466.34	48.43	205.19	24.96	326.88	369.89	355.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.23	23.70	23.74	62.68	58.08	60.28	58.68	39.87	36.37	34.56	31.11	12.77
Movement LOS	D	C	C	E	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	26.30			58.51			42.22			23.57		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	33.28											
Intersection LOS	C											
Intersection V/C	0.707											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	66	560	600	90	180	171
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	560	600	90	180	171
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	151	161	24	49	47
Total Analysis Volume [veh/h]	71	604	645	97	197	187
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	76	76	68	68	14	14
g / C, Green / Cycle	0.76	0.76	0.68	0.68	0.14	0.14
(v / s)_j Volume / Saturation Flow Rate	0.08	0.32	0.34	0.06	0.11	0.12
s, saturation flow rate [veh/h]	890	1900	1900	1591	1810	1528
c, Capacity [veh/h]	650	1453	1283	1074	259	219
d1, Uniform Delay [s]	4.52	4.06	7.98	5.62	41.15	41.78
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.88	1.41	0.17	1.73	3.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.42	0.50	0.09	0.76	0.85
d, Delay for Lane Group [s/veh]	4.86	4.94	9.39	5.78	42.88	45.43
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.30	3.19	6.05	0.64	4.70	4.63
50th-Percentile Queue Length [ft]	7.44	79.72	151.20	15.91	117.38	115.69
95th-Percentile Queue Length [veh]	0.54	5.74	10.08	1.15	8.25	8.16
95th-Percentile Queue Length [ft]	13.40	143.50	252.03	28.63	206.22	203.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.86	4.94	9.39	5.78	42.88	45.43
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.93		8.92		44.12	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	14.93					
Intersection LOS	B					
Intersection V/C	0.474					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	697	74	146	804	250	116	370	161	190	260	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	697	74	146	804	250	116	370	161	190	260	130
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	184	20	39	212	66	31	98	42	50	68	34
Total Analysis Volume [veh/h]	95	738	78	154	849	264	122	390	170	199	273	136
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	44	44	12	48	48	27	27	27	19	19	19
g / C, Green / Cycle	0.07	0.36	0.36	0.10	0.40	0.40	0.22	0.22	0.22	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.20	0.05	0.09	0.23	0.17	0.07	0.21	0.11	0.11	0.14	0.09
s, saturation flow rate [veh/h]	1810	3618	1528	1810	3618	1552	1810	1900	1546	1810	1900	1548
c, Capacity [veh/h]	120	1311	554	182	1435	616	402	422	343	292	307	250
d1, Uniform Delay [s]	55.21	30.66	25.72	53.06	28.55	26.33	38.97	45.73	40.84	47.41	49.28	46.26
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.25	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.75	0.53	4.07	1.80	2.18	0.16	17.27	0.41	1.04	5.65	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

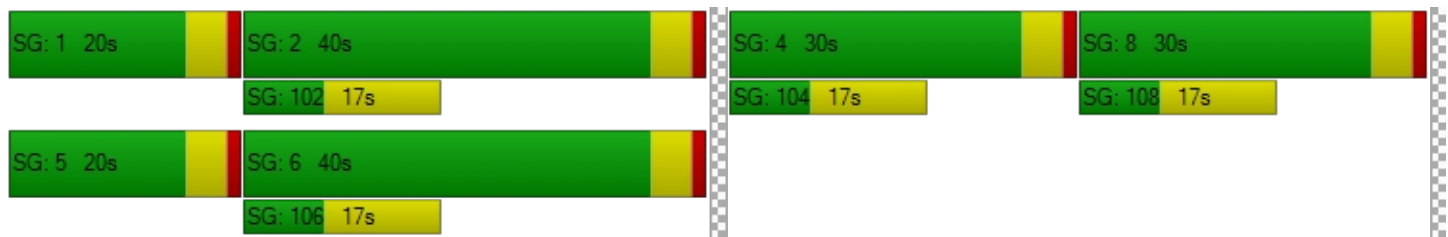
X, volume / capacity	0.79	0.56	0.14	0.84	0.59	0.43	0.30	0.92	0.50	0.68	0.89	0.54
d, Delay for Lane Group [s/veh]	59.51	32.41	26.25	57.13	30.35	28.51	39.13	63.00	41.25	48.46	54.93	46.95
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.72	1.57	5.00	10.65	6.27	3.00	13.23	4.40	5.64	8.40	3.75
50th-Percentile Queue Length [ft]	73.84	218.08	39.30	124.88	266.27	156.87	75.12	330.73	110.03	141.03	210.11	93.82
95th-Percentile Queue Length [veh]	5.32	13.57	2.83	8.66	16.00	10.38	5.41	19.19	7.84	9.54	13.16	6.75
95th-Percentile Queue Length [ft]	132.92	339.18	70.74	216.51	400.07	259.58	135.22	479.85	196.05	238.41	328.98	168.87

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	32.41	26.25	57.13	30.35	28.51	39.13	63.00	41.25	48.46	54.93	46.95
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	34.71			33.22			53.31			51.03		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	40.68											
Intersection LOS	D											
Intersection V/C	0.638											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	90	470	65	40	430	90	77	488	70	60	360	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	470	65	40	430	90	77	488	70	60	360	70
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	133	18	11	119	25	21	131	19	17	101	20
Total Analysis Volume [veh/h]	102	531	73	44	475	99	83	524	75	67	404	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.12	0.33	0.05	0.31	0.08	0.28	0.05	0.08	0.21	0.05
s, saturation flow rate [veh/h]	852	1852	829	1836	995	1900	1571	892	1900	1562
c, Capacity [veh/h]	284	861	267	854	297	725	600	217	725	596
d1, Uniform Delay [s]	22.21	12.75	21.44	12.50	22.11	15.85	12.05	25.76	14.58	12.09
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.50	4.74	1.32	4.20	0.19	0.61	0.03	0.30	0.25	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

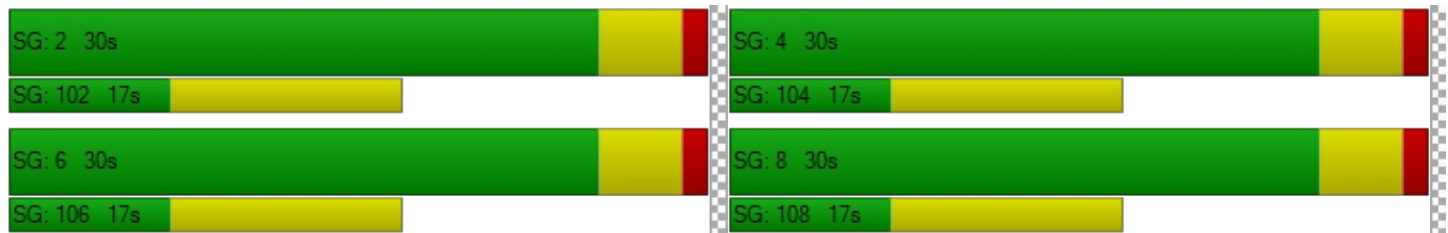
X, volume / capacity	0.36	0.70	0.16	0.67	0.28	0.72	0.13	0.31	0.56	0.13
d, Delay for Lane Group [s/veh]	25.70	17.48	22.77	16.70	22.30	16.46	12.09	26.05	14.83	12.13
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.53	6.75	0.60	6.04	0.97	5.32	0.57	0.87	3.74	0.60
50th-Percentile Queue Length [ft]	38.21	168.80	15.05	151.09	24.34	133.11	14.30	21.70	93.47	15.11
95th-Percentile Queue Length [veh]	2.75	11.01	1.08	10.08	1.75	9.11	1.03	1.56	6.73	1.09
95th-Percentile Queue Length [ft]	68.78	275.34	27.09	251.88	43.81	227.71	25.74	39.05	168.25	27.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.70	17.48	17.48	22.77	16.70	16.70	22.30	16.46	12.09	26.05	14.83	12.13
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.67			17.13			16.69			15.81		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.15											
Intersection LOS	B											
Intersection V/C	0.602											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	77	1109	80	60	1091	131	90	458	127	120	390	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	77	1109	80	60	1091	131	90	458	127	120	390	85
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	300	22	17	302	36	23	119	33	32	105	23
Total Analysis Volume [veh/h]	83	1200	87	66	1209	145	93	475	132	129	420	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	67	56	56	67	55	55	44	32	32	44	33	33
g / C, Green / Cycle	0.56	0.46	0.46	0.56	0.46	0.46	0.37	0.27	0.27	0.37	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.14	0.34	0.35	0.11	0.36	0.37	0.08	0.25	0.09	0.11	0.22	0.06
s, saturation flow rate [veh/h]	603	1900	1835	619	1900	1779	1157	1900	1511	1139	1900	1511
c, Capacity [veh/h]	291	883	853	308	877	822	313	503	400	281	519	413
d1, Uniform Delay [s]	20.50	26.13	26.33	18.25	27.21	27.78	28.09	43.19	35.50	29.96	40.64	33.71
k, delay calibration	0.50	0.50	0.50	0.25	0.50	0.50	0.08	0.20	0.04	0.04	0.11	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.45	5.44	5.93	0.79	6.92	8.57	0.41	14.93	0.18	0.44	3.25	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.74	0.75	0.21	0.78	0.81	0.30	0.94	0.33	0.46	0.81	0.22
d, Delay for Lane Group [s/veh]	22.95	31.57	32.26	19.04	34.13	36.35	28.50	58.12	35.67	30.40	43.89	33.81
Lane Group LOS	C	C	C	B	C	D	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.22	15.88	15.77	0.87	17.63	17.76	1.79	15.62	3.11	2.53	11.84	2.08
50th-Percentile Queue Length [ft]	30.41	396.98	394.33	21.74	440.87	444.05	44.87	390.61	77.78	63.17	295.98	51.94
95th-Percentile Queue Length [veh]	2.19	22.41	22.29	1.57	24.52	24.67	3.23	22.11	5.60	4.55	17.48	3.74
95th-Percentile Queue Length [ft]	54.75	560.35	557.17	39.14	613.04	616.84	80.76	552.67	140.00	113.70	437.05	93.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.95	31.89	32.26	19.04	35.09	36.35	28.50	58.12	35.67	30.40	43.89	33.81
Movement LOS	C	C	C	B	D	D	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	31.37			34.47			49.95			39.73		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.88											
Intersection LOS	D											
Intersection V/C	0.700											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	22	154	70	20	130	30	50	623	30	70	499	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	154	70	20	130	30	50	623	30	70	499	31
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	43	20	6	42	10	13	157	8	20	139	9
Total Analysis Volume [veh/h]	25	172	78	26	166	38	50	629	30	78	558	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	88	88	88	88
g / C, Green / Cycle	0.19	0.19	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.17	0.15	0.06	0.35	0.10	0.32
s, saturation flow rate [veh/h]	1619	1485	836	1881	787	1875
c, Capacity [veh/h]	336	312	560	1384	515	1380
d1, Uniform Delay [s]	47.32	45.78	10.28	6.44	11.82	6.12
k, delay calibration	0.14	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.11	3.41	0.31	1.18	0.62	0.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

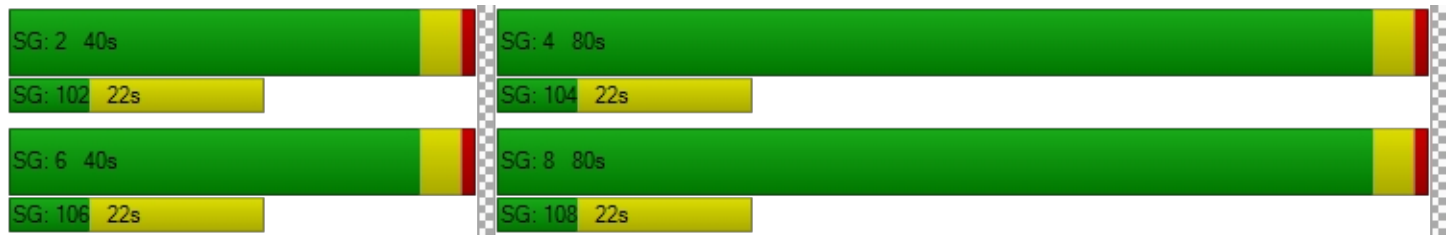
X, volume / capacity	0.82	0.74	0.09	0.48	0.15	0.43
d, Delay for Lane Group [s/veh]	53.43	49.19	10.60	7.61	12.45	7.10
Lane Group LOS	D	D	B	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	8.50	6.73	0.60	6.24	1.04	5.32
50th-Percentile Queue Length [ft]	212.61	168.37	14.89	155.98	25.92	133.06
95th-Percentile Queue Length [veh]	13.29	10.99	1.07	10.34	1.87	9.11
95th-Percentile Queue Length [ft]	332.17	274.77	26.81	258.40	46.65	227.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	53.43	53.43	53.43	49.19	49.19	49.19	10.60	7.61	7.61	12.45	7.10	7.10
Movement LOS	D	D	D	D	D	D	B	A	A	B	A	A
d_A, Approach Delay [s/veh]	53.43			49.19			7.82			7.72		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	19.49											
Intersection LOS	B											
Intersection V/C	0.520											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	78	925	50	50	910	90	80	505	50	160	419	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	78	925	50	50	910	90	80	505	50	160	419	50
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	256	14	13	240	24	21	132	13	44	117	14
Total Analysis Volume [veh/h]	86	1023	55	53	960	95	84	530	52	178	466	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	61	53	53	61	52	52	49	35	35	49	40	40
g / C, Green / Cycle	0.51	0.44	0.44	0.51	0.43	0.43	0.41	0.29	0.29	0.41	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.12	0.29	0.29	0.08	0.28	0.29	0.08	0.28	0.03	0.16	0.25	0.04
s, saturation flow rate [veh/h]	696	1900	1856	674	1900	1819	1078	1900	1527	1117	1900	1501
c, Capacity [veh/h]	321	832	813	312	823	788	326	556	447	306	627	496
d1, Uniform Delay [s]	18.79	26.54	26.60	18.30	26.83	26.96	24.96	41.63	31.08	28.39	35.64	27.94
k, delay calibration	0.50	0.50	0.50	0.07	0.50	0.50	0.07	0.34	0.04	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.04	3.98	4.14	0.17	3.98	4.30	0.26	21.96	0.04	0.65	2.90	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

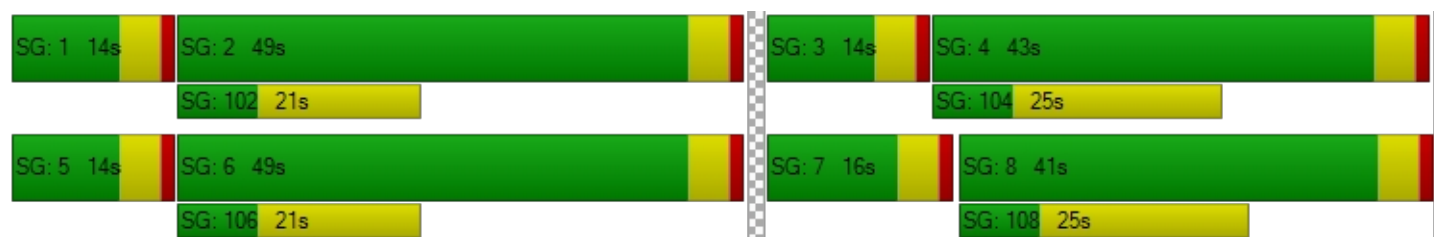
X, volume / capacity	0.27	0.65	0.66	0.17	0.65	0.66	0.26	0.95	0.12	0.58	0.74	0.11
d, Delay for Lane Group [s/veh]	20.83	30.52	30.74	18.47	30.81	31.26	25.23	63.59	31.12	29.04	38.54	27.98
Lane Group LOS	C	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.39	12.98	12.82	0.75	12.84	12.57	1.48	18.43	1.11	3.31	12.35	1.12
50th-Percentile Queue Length [ft]	34.79	324.55	320.48	18.66	321.12	314.15	36.89	460.66	27.66	82.74	308.87	28.04
95th-Percentile Queue Length [veh]	2.50	18.89	18.69	1.34	18.72	18.38	2.66	25.47	1.99	5.96	18.12	2.02
95th-Percentile Queue Length [ft]	62.62	472.28	467.28	33.59	468.06	459.49	66.40	636.65	49.80	148.93	452.98	50.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.83	30.62	30.74	18.47	31.01	31.26	25.23	63.59	31.12	29.04	38.54	27.98
Movement LOS	C	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	29.91			30.43			56.22			35.28		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	35.92											
Intersection LOS	D											
Intersection V/C	0.658											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	85	496	140	20	240	30	50	520	90	30	445	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	496	140	20	240	30	50	520	90	30	445	54
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	137	39	5	65	8	13	137	24	9	130	16
Total Analysis Volume [veh/h]	94	549	155	22	261	33	53	549	95	35	519	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.09	0.32	0.11	0.03	0.15	0.02	0.07	0.32	0.07	0.04	0.30	0.05
s, saturation flow rate [veh/h]	1017	1710	1378	784	1710	1415	800	1710	1319	782	1710	1286
c, Capacity [veh/h]	460	818	659	257	818	677	184	668	515	165	668	502
d1, Uniform Delay [s]	16.22	14.04	10.74	23.23	11.25	9.76	30.23	19.16	14.02	31.04	18.68	13.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.12	0.04	0.04	0.09	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	4.37	0.84	0.65	1.03	0.14	0.32	2.99	0.06	0.24	1.75	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

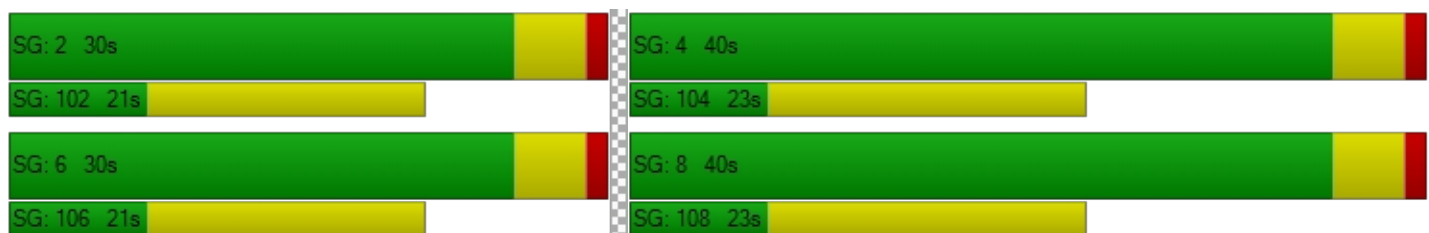
X, volume / capacity	0.20	0.67	0.24	0.09	0.32	0.05	0.29	0.82	0.18	0.21	0.78	0.13
d, Delay for Lane Group [s/veh]	17.23	18.40	11.57	23.89	12.28	9.89	30.54	22.15	14.08	31.27	20.42	13.72
Lane Group LOS	B	B	B	C	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.11	6.68	1.38	0.33	2.40	0.26	0.83	7.62	0.90	0.55	6.84	0.58
50th-Percentile Queue Length [ft]	27.81	167.06	34.56	8.25	60.03	6.58	20.77	190.57	22.60	13.81	170.96	14.62
95th-Percentile Queue Length [veh]	2.00	10.92	2.49	0.59	4.32	0.47	1.50	12.15	1.63	0.99	11.13	1.05
95th-Percentile Queue Length [ft]	50.05	273.05	62.20	14.84	108.05	11.85	37.38	303.77	40.68	24.86	278.17	26.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.23	18.40	11.57	23.89	12.28	9.89	30.54	22.15	14.08	31.27	20.42	13.72
Movement LOS	B	B	B	C	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	16.94			12.83			21.69			20.36		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.64											
Intersection LOS	B											
Intersection V/C	0.642											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	100	482	60	60	468	130	160	390	100	190	490	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	482	60	60	468	130	160	390	100	190	490	50
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	133	17	16	124	35	44	106	27	55	141	14
Total Analysis Volume [veh/h]	110	532	66	64	498	138	174	425	109	219	564	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	7	43	43	32	32	32	10	23	23	10	23	23
g / C, Green / Cycle	0.08	0.48	0.48	0.35	0.35	0.35	0.12	0.25	0.25	0.12	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.06	0.28	0.04	0.07	0.17	0.18	0.10	0.22	0.07	0.12	0.17	0.17
s, saturation flow rate [veh/h]	1810	1900	1543	881	1900	1703	1810	1900	1466	1810	1900	1803
c, Capacity [veh/h]	141	913	742	188	668	599	209	476	367	209	477	453
d1, Uniform Delay [s]	40.81	16.90	12.71	37.42	22.92	23.11	39.01	32.60	27.34	39.85	30.33	30.45
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.14	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.53	2.72	0.24	4.87	2.59	3.12	3.29	7.74	0.17	46.55	0.59	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

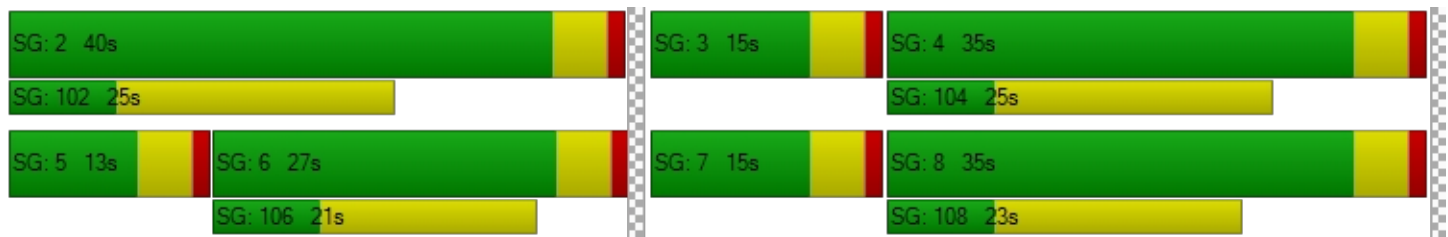
X, volume / capacity	0.78	0.58	0.09	0.34	0.49	0.51	0.83	0.89	0.30	1.05	0.66	0.68
d, Delay for Lane Group [s/veh]	44.35	19.61	12.95	42.29	25.51	26.23	42.31	40.34	27.50	86.40	30.92	31.12
Lane Group LOS	D	B	B	D	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.50	8.16	0.75	1.57	5.78	5.50	3.90	9.71	1.89	7.21	6.01	5.84
50th-Percentile Queue Length [ft]	62.60	203.90	18.64	39.23	144.61	137.56	97.44	242.85	47.15	180.34	150.14	146.12
95th-Percentile Queue Length [veh]	4.51	12.84	1.34	2.82	9.73	9.35	7.02	14.83	3.39	11.83	10.02	9.81
95th-Percentile Queue Length [ft]	112.69	320.99	33.55	70.62	243.22	233.73	175.39	370.63	84.87	295.65	250.61	245.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.35	19.61	12.95	42.29	25.75	26.23	42.31	40.34	27.50	86.40	31.01	31.12
Movement LOS	D	B	B	D	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	22.83			27.36			38.85			45.44		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.17											
Intersection LOS	C											
Intersection V/C	0.625											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	350	70	330	0	470	0	962	240	120	909	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	350	70	330	0	470	0	962	240	120	909	0
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	1.0000	0.9224	0.9224	0.8935	0.8935	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	115	23	90	0	128	0	261	65	34	254	0
Total Analysis Volume [veh/h]	13	459	92	360	0	512	0	1043	260	134	1017	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			173			0		
Bicycle Volume [bicycles/h]	32			6			28			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	30	0	30	0	48	0	48	0	12	60	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	20	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	30	30	14	54	50	50	7	62
g / C, Green / Cycle	0.02	0.25	0.25	0.12	0.45	0.42	0.42	0.06	0.52
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.17	0.10	0.18	0.34	0.38	0.07	0.28
s, saturation flow rate [veh/h]	1810	1900	1602	3514	2816	1900	1723	1810	3618
c, Capacity [veh/h]	38	467	394	424	1255	795	721	112	1876
d1, Uniform Delay [s]	57.94	40.10	41.03	51.68	22.53	30.90	32.64	56.29	19.35
k, delay calibration	0.04	0.04	0.06	0.04	0.04	0.50	0.50	0.16	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.98	0.47	1.11	1.85	0.08	9.24	16.86	112.49	1.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.60	0.68	0.85	0.41	0.82	0.90	1.20	0.54
d, Delay for Lane Group [s/veh]	59.92	40.57	42.14	53.54	22.61	40.14	49.50	168.78	20.48
Lane Group LOS	E	D	D	D	C	D	D	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.41	7.44	7.31	5.41	4.89	17.73	19.95	7.05	10.56
50th-Percentile Queue Length [ft]	10.26	185.93	182.76	135.24	122.29	443.17	498.72	176.28	263.91
95th-Percentile Queue Length [veh]	0.74	11.91	11.74	9.22	8.52	24.63	27.27	12.02	15.88
95th-Percentile Queue Length [ft]	18.47	297.74	293.62	230.60	212.97	615.79	681.84	300.57	397.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.92	41.17	42.14	53.54	0.00	22.61	0.00	43.65	49.50	168.78	20.48	0.00
Movement LOS	E	D	D	D		C		D	D	F	C	
d_A, Approach Delay [s/veh]	41.76			35.38			44.82			37.74		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.17											
Intersection LOS	D											
Intersection V/C	0.722											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1115	60	70	1263	30	40	100	40	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1115	60	70	1263	30	40	100	40	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	299	16	18	326	8	12	30	12	11	29	7
Total Analysis Volume [veh/h]	32	1196	64	72	1303	31	48	119	48	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	55	55	55	55	55	55	16	16
g / C, Green / Cycle	0.69	0.69	0.69	0.69	0.69	0.69	0.20	0.20
(v / s)_j Volume / Saturation Flow Rate	0.08	0.33	0.34	0.16	0.35	0.35	0.13	0.12
s, saturation flow rate [veh/h]	416	1900	1861	447	1900	1877	1627	1599
c, Capacity [veh/h]	293	1304	1277	314	1304	1289	378	373
d1, Uniform Delay [s]	11.39	5.91	5.92	11.89	6.07	6.09	29.36	28.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	1.30	1.34	1.70	1.45	1.48	0.50	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

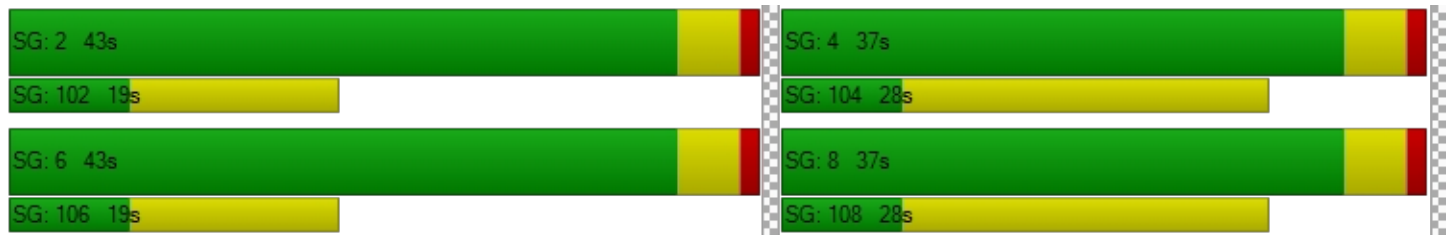
X, volume / capacity	0.11	0.49	0.49	0.23	0.51	0.52	0.57	0.50
d, Delay for Lane Group [s/veh]	12.15	7.21	7.26	13.59	7.52	7.57	29.86	29.10
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	4.17	4.13	0.84	4.53	4.52	3.67	3.12
50th-Percentile Queue Length [ft]	8.73	104.34	103.22	20.89	113.32	113.10	91.83	77.89
95th-Percentile Queue Length [veh]	0.63	7.51	7.43	1.50	8.02	8.01	6.61	5.61
95th-Percentile Queue Length [ft]	15.71	187.82	185.79	37.60	200.61	200.31	165.29	140.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.15	7.24	7.26	13.59	7.54	7.57	29.86	29.86	29.86	29.10	29.10	29.10
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.36			7.85			29.86			29.10		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.45											
Intersection LOS	B											
Intersection V/C	0.486											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	1035	40	20	1030	30	40	130	60	20	150	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1035	40	20	1030	30	40	130	60	20	150	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	273	11	5	267	8	12	39	18	6	41	3
Total Analysis Volume [veh/h]	42	1091	42	21	1069	31	49	158	73	22	165	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.30	0.30	0.04	0.29	0.29	0.17	0.11
s, saturation flow rate [veh/h]	520	1900	1868	504	1900	1874	1676	1777
c, Capacity [veh/h]	344	1253	1232	333	1253	1236	431	450
d1, Uniform Delay [s]	11.36	6.61	6.63	11.18	6.53	6.54	28.58	26.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	1.19	1.22	0.36	1.13	1.15	0.62	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.45	0.46	0.06	0.44	0.44	0.65	0.44
d, Delay for Lane Group [s/veh]	12.09	7.81	7.85	11.54	7.66	7.69	29.20	27.05
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.46	4.24	4.20	0.22	4.05	4.02	4.78	3.15
50th-Percentile Queue Length [ft]	11.43	105.88	104.97	5.57	101.21	100.55	119.59	78.69
95th-Percentile Queue Length [veh]	0.82	7.61	7.56	0.40	7.29	7.24	8.37	5.67
95th-Percentile Queue Length [ft]	20.57	190.25	188.94	10.02	182.18	180.98	209.26	141.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.09	7.83	7.85	11.54	7.67	7.69	29.20	29.20	29.20	27.05	27.05	27.05
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.98			7.75			29.20			27.05		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.39											
Intersection LOS	B											
Intersection V/C	0.468											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	40	1187	60	30	1263	60	40	80	30	160	60	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1187	60	30	1263	60	40	80	30	160	60	40
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	350	18	8	322	15	11	22	8	46	17	11
Total Analysis Volume [veh/h]	47	1402	71	31	1288	61	43	87	32	184	69	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	22	22	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.28	0.28	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.11	0.39	0.39	0.08	0.36	0.36	0.16	0.02	0.19	0.03
s, saturation flow rate [veh/h]	411	1900	1860	365	1900	1862	790	1529	1300	1566
c, Capacity [veh/h]	240	1150	1126	211	1150	1127	281	428	441	438
d1, Uniform Delay [s]	18.17	10.22	10.28	19.50	9.70	9.74	23.82	21.19	25.75	21.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.81	2.79	2.92	1.46	2.23	2.32	0.44	0.03	0.44	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

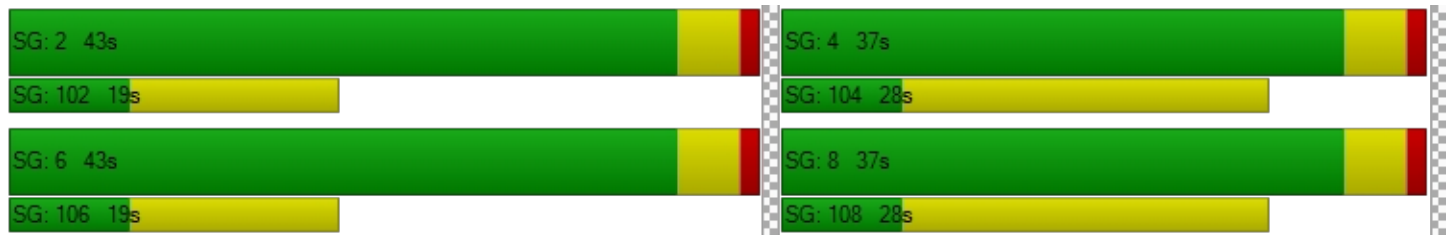
X, volume / capacity	0.20	0.64	0.65	0.15	0.59	0.59	0.46	0.07	0.57	0.11
d, Delay for Lane Group [s/veh]	19.99	13.00	13.20	20.96	11.93	12.06	24.26	21.21	26.19	21.41
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.70	7.76	7.74	0.48	6.69	6.65	1.83	0.42	4.11	0.62
50th-Percentile Queue Length [ft]	17.59	193.92	193.59	12.07	167.18	166.13	45.86	10.62	102.63	15.40
95th-Percentile Queue Length [veh]	1.27	12.32	12.31	0.87	10.93	10.87	3.30	0.76	7.39	1.11
95th-Percentile Queue Length [ft]	31.66	308.11	307.68	21.73	273.20	271.82	82.55	19.12	184.74	27.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.99	13.10	13.20	20.96	11.99	12.06	24.26	24.26	21.21	26.19	26.19	21.41
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.32			12.19			23.66			25.46		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.43											
Intersection LOS	B											
Intersection V/C	0.588											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1247	110	70	1253	240	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1247	110	70	1253	240	100
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	370	33	19	349	66	28
Total Analysis Volume [veh/h]	1482	131	78	1394	265	110
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.43	0.45	0.25	0.39	0.15	0.07
s, saturation flow rate [veh/h]	1863	1794	313	3547	1728	1560
c, Capacity [veh/h]	1337	1287	223	2546	311	281
d1, Uniform Delay [s]	6.31	6.50	17.66	5.90	35.69	32.50
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.02	2.31	4.28	0.85	6.58	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

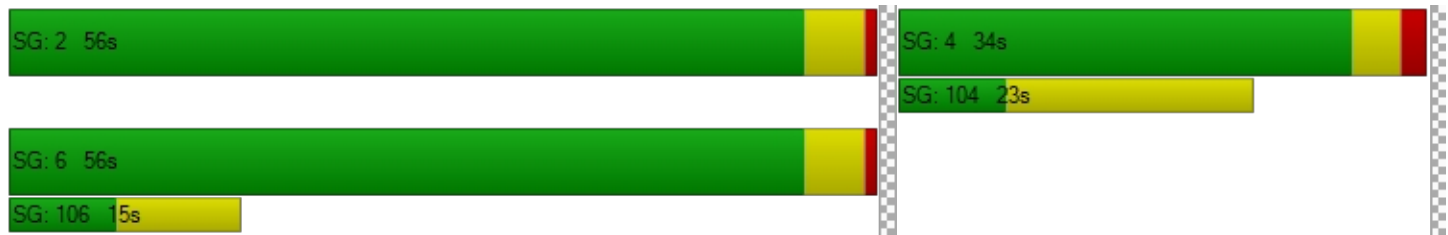
X, volume / capacity	0.60	0.63	0.35	0.55	0.85	0.39
d, Delay for Lane Group [s/veh]	8.34	8.82	21.95	6.75	42.27	33.40
Lane Group LOS	A	A	C	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.36	6.61	1.38	5.09	6.00	2.12
50th-Percentile Queue Length [ft]	159.02	165.15	34.39	127.26	150.12	53.12
95th-Percentile Queue Length [veh]	10.50	10.82	2.48	8.79	10.02	3.82
95th-Percentile Queue Length [ft]	262.43	270.53	61.90	219.76	250.58	95.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	8.55	8.82	21.95	6.75	42.27	33.40
Movement LOS	A	A	C	A	D	C
d_A, Approach Delay [s/veh]	8.58		7.55		39.67	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	11.51					
Intersection LOS	B					
Intersection V/C	0.603					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	1026	97	40	1008	60	92	380	90	100	280	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1026	97	40	1008	60	92	380	90	100	280	50
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	286	27	10	256	15	24	99	23	30	83	15
Total Analysis Volume [veh/h]	22	1143	108	41	1023	61	96	395	94	118	331	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	25	25	25
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.04	0.33	0.34	0.09	0.29	0.29	0.41	0.44
s, saturation flow rate [veh/h]	529	1900	1823	451	1900	1848	1413	1143
c, Capacity [veh/h]	205	807	775	167	807	785	666	556
d1, Uniform Delay [s]	22.01	14.86	14.96	26.48	13.90	13.95	16.20	16.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.47
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.05	7.58	8.34	3.48	4.55	4.80	13.27	20.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.79	0.80	0.25	0.68	0.68	0.88	0.91
d, Delay for Lane Group [s/veh]	23.06	22.44	23.30	29.97	18.46	18.75	29.46	37.56
Lane Group LOS	C	C	C	C	B	B	C	D
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.31	8.08	8.04	0.70	6.17	6.12	8.69	8.88
50th-Percentile Queue Length [ft]	7.87	201.95	201.04	17.62	154.31	152.89	217.14	221.90
95th-Percentile Queue Length [veh]	0.57	12.74	12.69	1.27	10.25	10.17	13.52	13.76
95th-Percentile Queue Length [ft]	14.16	318.48	317.30	31.72	256.17	254.28	337.97	344.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.06	22.82	23.30	29.97	18.59	18.75	29.46	29.46	29.46	37.56	37.56	37.56
Movement LOS	C	C	C	C	B	B	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	22.87			19.02			29.46			37.56		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	24.87											
Intersection LOS	C											
Intersection V/C	0.783											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	356	110	30	150	30	70	502	60	30	407	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	356	110	30	150	30	70	502	60	30	407	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	91	28	10	49	10	18	132	16	8	110	5
Total Analysis Volume [veh/h]	31	364	112	39	195	39	74	529	63	32	440	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	21	30	30
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.03	0.27	0.04	0.10	0.03	0.38	0.27
s, saturation flow rate [veh/h]	1199	1757	914	1863	1525	1745	1812
c, Capacity [veh/h]	409	625	187	663	543	923	953
d1, Uniform Delay [s]	17.76	17.09	26.91	13.91	12.78	12.22	10.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.95	0.55	0.24	0.06	4.86	2.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

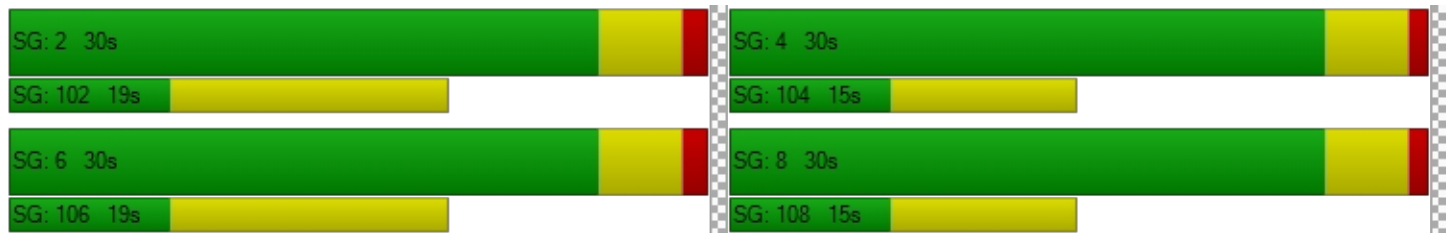
X, volume / capacity	0.08	0.76	0.21	0.29	0.07	0.72	0.52
d, Delay for Lane Group [s/veh]	17.83	19.04	27.46	14.16	12.84	17.08	12.56
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.31	5.33	0.54	1.76	0.32	6.82	4.12
50th-Percentile Queue Length [ft]	7.83	133.35	13.53	44.02	8.09	170.50	103.03
95th-Percentile Queue Length [veh]	0.56	9.12	0.97	3.17	0.58	11.10	7.42
95th-Percentile Queue Length [ft]	14.10	228.04	24.35	79.23	14.56	277.57	185.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.83	19.04	19.04	27.46	14.16	12.84	17.08	17.08	17.08	12.56	12.56	12.56
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.96			15.87			17.08			12.56		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.25											
Intersection LOS	B											
Intersection V/C	0.653											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	488	0	140	0	0	0	0	1413	623	50	1365	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	488	0	140	0	0	0	0	1413	623	50	1365	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	147	0	42	0	0	0	0	399	176	14	369	0
Total Analysis Volume [veh/h]	590	0	169	0	0	0	0	1598	704	54	1478	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	0	74	74	110	74	74	74
g / C, Green / Cycle	0.26	0.26	0.00	0.62	0.62	0.92	0.62	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.22	0.22	0.00	0.00	0.31	0.44	0.17	0.27	0.27
s, saturation flow rate [veh/h]	1810	1681	1863	356	5176	1615	323	3618	1900
c, Capacity [veh/h]	478	444	7	222	3191	1479	197	2230	1171
d1, Uniform Delay [s]	41.34	41.52	0.00	0.00	12.75	0.75	23.94	12.04	12.04
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.46	4.06	0.00	0.00	0.56	1.09	3.42	0.62	1.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

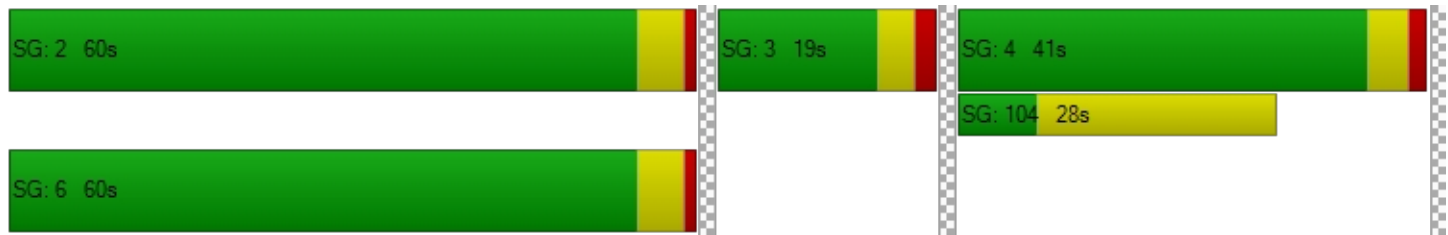
X, volume / capacity	0.82	0.83	0.00	0.00	0.50	0.48	0.27	0.43	0.43
d, Delay for Lane Group [s/veh]	44.80	45.58	0.00	0.00	13.31	1.84	27.36	12.65	13.21
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	11.21	10.70	0.00	0.00	7.62	0.45	1.23	6.59	7.10
50th-Percentile Queue Length [ft]	280.34	267.47	0.00	0.00	190.38	11.23	30.77	164.72	177.55
95th-Percentile Queue Length [veh]	16.71	16.06	0.00	0.00	12.14	0.81	2.22	10.80	11.47
95th-Percentile Queue Length [ft]	417.64	401.57	0.00	0.00	303.53	20.21	55.39	269.96	286.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.07	45.58	45.58	0.00	0.00	0.00	0.00	13.31	1.84	27.36	12.85	13.21
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.18			0.00			9.81			13.36		
Approach LOS	D			A			A			B		
d_I, Intersection Delay [s/veh]	16.84											
Intersection LOS	B											
Intersection V/C	0.528											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	34.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.962

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	283	152	20	173	32	64	202	0	14	137	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	283	152	20	173	32	64	202	0	14	137	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	81	44	6	54	10	20	62	0	4	43	6
Total Analysis Volume [veh/h]	23	325	175	25	217	40	78	248	0	18	172	25
Pedestrian Volume [ped/h]	10			5			6			7		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	543	488	481	461
Degree of Utilization, x	0.96	0.58	0.68	0.47

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	12.79	3.60	5.01	2.43
95th-Percentile Queue Length [ft]	319.67	90.06	125.27	60.72
Approach Delay [s/veh]	55.40	19.99	24.80	17.44
Approach LOS	F	C	C	C
Intersection Delay [s/veh]	34.51			
Intersection LOS	D			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	20	580	646	44	69	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	580	646	44	69	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	161	169	11	21	6
Total Analysis Volume [veh/h]	22	645	674	46	85	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	12	12	12	4
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.15
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.35	0.03	0.06
s, saturation flow rate [veh/h]	773	1900	1900	1588	1761
c, Capacity [veh/h]	383	907	907	758	277
d1, Uniform Delay [s]	9.92	5.20	5.33	3.54	9.54
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.39	0.46	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

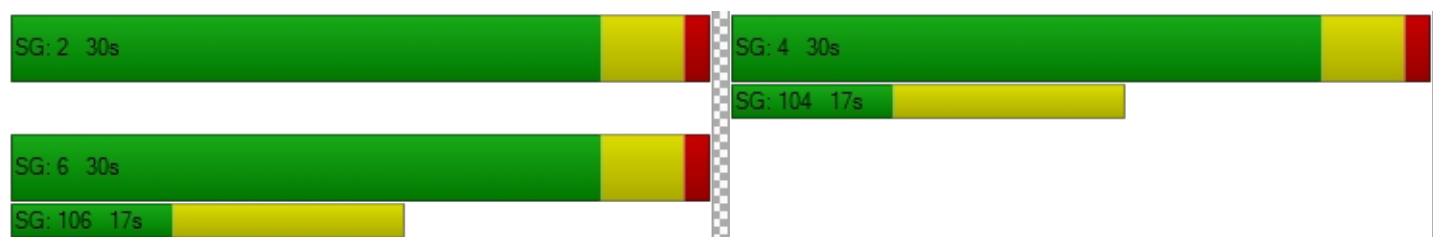
X, volume / capacity	0.06	0.71	0.74	0.06	0.40
d, Delay for Lane Group [s/veh]	9.94	5.59	5.78	3.55	9.88
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.08	0.82	0.89	0.04	0.41
50th-Percentile Queue Length [ft]	1.88	20.57	22.26	0.94	10.18
95th-Percentile Queue Length [veh]	0.14	1.48	1.60	0.07	0.73
95th-Percentile Queue Length [ft]	3.38	37.03	40.07	1.70	18.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.94	5.59	5.78	3.55	9.88	9.88
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.74		5.64		9.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.00					
Intersection LOS	A					
Intersection V/C	0.417					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Base Volume Input [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	342	3	3	375	181	210	3	34
Total Analysis Volume [veh/h]	0	0	0	61	1369	10	10	1500	723	841	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		52	52	52	52	52	85	28	28
g / C, Green / Cycle		0.58	0.58	0.58	0.58	0.58	0.95	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate		0.17	0.36	0.36	0.03	0.41	0.45	0.24	0.09
s, saturation flow rate [veh/h]		355	1900	1895	391	3618	1615	3514	1600
c, Capacity [veh/h]		172	1109	1106	203	2111	1525	1103	502
d1, Uniform Delay [s]		29.85	12.22	12.22	21.62	13.29	0.25	27.75	23.20
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.66	2.64	2.65	0.46	2.06	1.06	1.12	0.31
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.36	0.62	0.62	0.05	0.71	0.47	0.76	0.29
d, Delay for Lane Group [s/veh]		35.52	14.85	14.87	22.08	15.35	1.31	28.87	23.51
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	10.41	10.40	0.17	9.94	0.45	7.91	2.26
50th-Percentile Queue Length [ft]		38.02	260.34	259.98	4.24	248.59	11.22	197.79	56.48
95th-Percentile Queue Length [veh]		2.74	15.71	15.69	0.30	15.11	0.81	12.52	4.07
95th-Percentile Queue Length [ft]		68.43	392.65	392.20	7.62	377.87	20.19	313.11	101.66

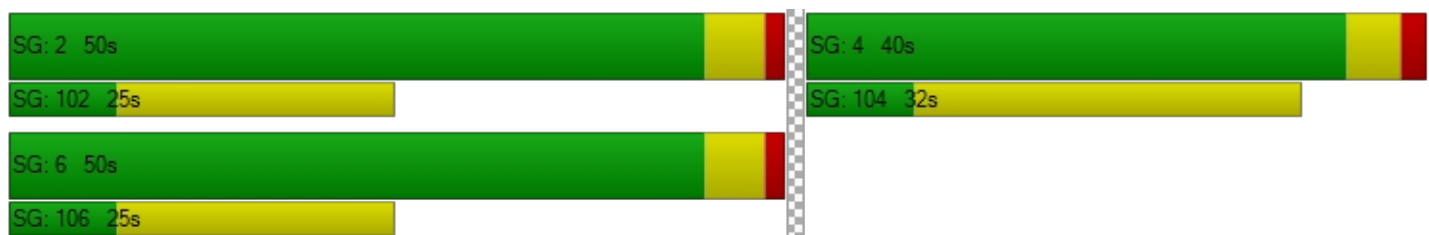


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.52	14.86	14.87	22.08	15.35	1.31	28.87	23.51	23.51
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			15.73			10.83			28.09		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.654											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	46.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

**Intersection Setup**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	308	280	420	0	230	643	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	308	280	420	0	230	643	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	81	73	109	0	60	169	0	21
Total Analysis Volume [veh/h]	0	0	0	0	323	293	438	0	240	674	0	84
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.18	0.18	0.24	0.13	0.35	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		35.62	15.67	35.31	4.51	21.63	14.73
k, delay calibration		0.17	0.29	0.47	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		14.72	0.91	82.17	0.29	7.89	0.33
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.92	0.39	1.12	0.18	0.80	0.12
d, Delay for Lane Group [s/veh]		50.34	16.58	117.48	4.80	29.53	15.06
Lane Group LOS		D	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		8.40	4.10	17.22	1.35	13.37	1.04
50th-Percentile Queue Length [ft]		210.10	102.49	430.46	33.70	334.35	26.11
95th-Percentile Queue Length [veh]		13.16	7.38	25.55	2.43	19.37	1.88
95th-Percentile Queue Length [ft]		328.96	184.49	638.84	60.65	484.29	47.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	50.34	16.58	117.48	0.00	4.80	29.53	0.00	15.06
Movement LOS					D	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			34.28			77.59			27.92		
Approach LOS	A			C			E			C		
d_I, Intersection Delay [s/veh]	46.24											
Intersection LOS	D											
Intersection V/C	0.775											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	166	190	160	140	60	10	50	1055	100	0	837	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	166	190	160	140	60	10	50	1055	100	0	837	90
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	53	44	39	17	3	14	292	28	0	243	26
Total Analysis Volume [veh/h]	184	210	177	156	67	11	55	1168	111	0	971	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	53	53	53	53	53
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.16	0.13	0.13	0.15	0.05	0.12	0.27	0.27	0.32	0.34
s, saturation flow rate [veh/h]	1154	1676	1344	1029	1624	470	3192	1578	1676	1604
c, Capacity [veh/h]	369	520	417	271	504	250	1875	927	985	943
d1, Uniform Delay [s]	30.09	24.47	24.65	35.16	22.48	20.69	10.45	10.51	11.27	11.52
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	0.50	0.69	1.92	0.14	2.01	0.80	1.65	2.17	2.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.40	0.42	0.58	0.15	0.22	0.45	0.46	0.55	0.57
d, Delay for Lane Group [s/veh]	31.13	24.97	25.34	37.08	22.62	22.70	11.24	12.16	13.45	14.02
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	3.58	3.52	3.01	3.36	1.20	0.95	4.52	4.78	6.47	6.66
50th-Percentile Queue Length [ft]	89.46	88.01	75.17	83.94	29.91	23.81	112.97	119.59	161.77	166.47
95th-Percentile Queue Length [veh]	6.44	6.34	5.41	6.04	2.15	1.71	8.00	8.37	10.64	10.89
95th-Percentile Queue Length [ft]	161.04	158.41	135.30	151.09	53.84	42.85	200.12	209.27	266.07	272.26

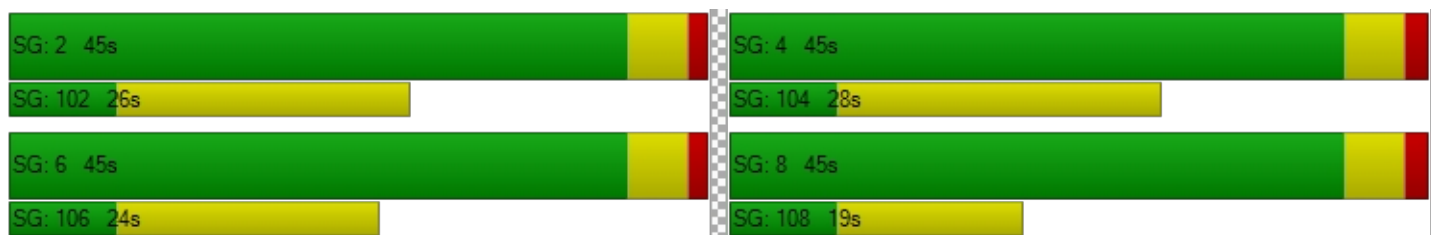


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.13	24.97	25.34	37.08	22.62	22.62	22.70	11.49	12.16	0.00	13.70	14.02
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	27.07			32.26			12.01			13.73		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.74											
Intersection LOS	B											
Intersection V/C	0.494											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.644

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⏏⏏⏏			⏏⏏⏏			⏏⏏			⏏⏏		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	0	577	110	164	913	110	160	840	114	70	750	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	577	110	164	913	110	160	840	114	70	750	70
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	153	29	49	275	33	46	243	33	20	212	20
Total Analysis Volume [veh/h]	0	610	116	197	1098	132	185	973	132	79	847	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	43	33	33	42	39	39	38	30	30	38	26	26
g / C, Green / Cycle	0.47	0.36	0.36	0.47	0.43	0.43	0.42	0.33	0.33	0.42	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.00	0.17	0.07	0.12	0.31	0.08	0.20	0.30	0.31	0.11	0.25	0.25
s, saturation flow rate [veh/h]	575	3547	1558	1643	3547	1563	913	1900	1777	720	1900	1808
c, Capacity [veh/h]	256	1285	564	779	1517	668	361	628	588	273	550	523
d1, Uniform Delay [s]	0.00	22.14	19.80	14.17	21.37	16.12	20.59	28.68	29.04	20.64	30.25	30.44
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.35	0.37	0.11	0.25	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	1.26	0.82	0.78	3.03	0.66	5.10	13.34	17.73	0.58	8.61	10.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

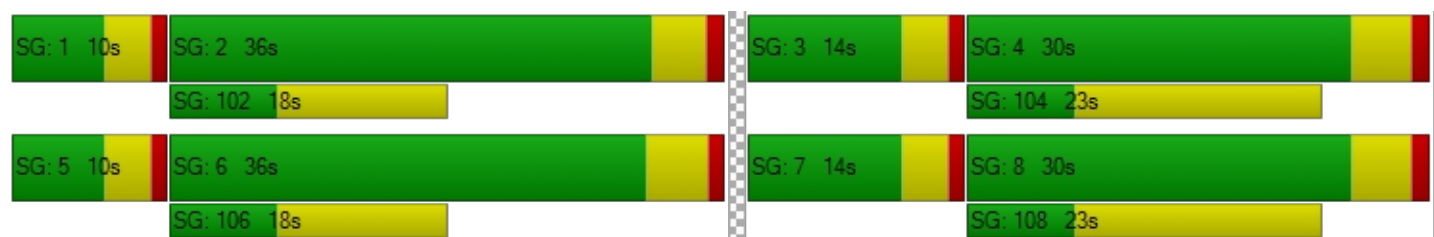
X, volume / capacity	0.00	0.47	0.21	0.25	0.72	0.20	0.51	0.90	0.92	0.29	0.86	0.87
d, Delay for Lane Group [s/veh]	0.00	23.40	20.63	14.95	24.41	16.78	25.70	42.02	46.77	21.22	38.86	40.87
Lane Group LOS	A	C	C	B	C	B	C	D	D	C	D	D
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.00	5.04	1.77	2.47	9.71	1.77	2.87	13.23	13.52	1.01	10.61	10.60
50th-Percentile Queue Length [ft]	0.00	125.93	44.16	61.73	242.81	44.20	71.73	330.63	338.01	25.15	265.35	264.92
95th-Percentile Queue Length [veh]	0.00	8.72	3.18	4.44	14.82	3.18	5.16	19.19	19.55	1.81	15.96	15.94
95th-Percentile Queue Length [ft]	0.00	217.94	79.49	111.12	370.59	79.56	129.12	479.74	488.77	45.28	398.92	398.39

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	23.40	20.63	14.95	24.41	16.78	25.70	44.02	46.77	21.22	39.75	40.87
Movement LOS	A	C	C	B	C	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	22.95			22.39			41.68			38.38		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.69											
Intersection LOS	C											
Intersection V/C	0.644											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	182	1015	80	0	939	80	139	993	120	60	777	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	182	1015	80	0	939	80	139	993	120	60	777	51
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	287	23	0	262	22	38	268	32	19	251	16
Total Analysis Volume [veh/h]	206	1149	91	0	1047	89	150	1074	130	78	1005	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	40	40	40	40	40
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.41	0.34	0.34	0.21	0.22	0.28	0.30	0.09	0.15	0.28	0.29
s, saturation flow rate [veh/h]	500	1863	1804	3547	1751	534	3618	1498	523	1900	1838
c, Capacity [veh/h]	220	837	811	1594	787	190	1623	672	182	852	825
d1, Uniform Delay [s]	36.49	20.57	20.70	17.36	17.43	38.23	19.48	15.00	34.33	19.15	19.24
k, delay calibration	0.40	0.27	0.28	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	40.41	3.39	3.75	0.22	0.46	27.57	2.14	0.64	7.25	3.60	3.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.94	0.75	0.76	0.48	0.48	0.79	0.66	0.19	0.43	0.63	0.64
d, Delay for Lane Group [s/veh]	76.90	23.96	24.45	17.58	17.88	65.80	21.62	15.64	41.58	22.75	23.08
Lane Group LOS	E	C	C	B	B	E	C	B	D	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	7.02	11.06	10.98	5.29	5.36	4.77	8.81	1.67	1.93	8.93	8.83
50th-Percentile Queue Length [ft]	175.59	276.55	274.53	132.35	134.09	119.33	220.26	41.80	48.17	223.25	220.66
95th-Percentile Queue Length [veh]	11.37	16.52	16.42	9.07	9.16	8.36	13.68	3.01	3.47	13.83	13.70
95th-Percentile Queue Length [ft]	284.24	412.92	410.40	226.68	229.05	208.91	341.96	75.24	86.71	345.77	342.47



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	76.90	24.18	24.45	0.00	17.67	17.88	65.80	21.62	15.64	41.58	22.90	23.08
Movement LOS	E	C	C		B	B	E	C	B	D	C	C
d_A, Approach Delay [s/veh]	31.71			17.68			25.94			24.18		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	25.34											
Intersection LOS	C											
Intersection V/C	0.709											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration	↑↑↑↑			↑↑↑↑			↑↑↑			↑↑↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	216	783	534	360	958	340	64	929	140	130	744	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	783	534	360	958	340	64	929	140	130	744	63
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	222	152	97	257	91	17	244	37	38	218	18
Total Analysis Volume [veh/h]	245	890	607	387	1029	365	67	976	147	153	873	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	40	57	12	40	57	12	36	54	12	37	37
g / C, Green / Cycle	0.10	0.33	0.47	0.10	0.33	0.47	0.10	0.30	0.45	0.10	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.14	0.18	0.39	0.11	0.20	0.24	0.04	0.27	0.10	0.09	0.24	0.05
s, saturation flow rate [veh/h]	1810	5074	1564	3445	5074	1504	1810	3618	1450	1774	3618	1496
c, Capacity [veh/h]	187	1682	748	357	1682	720	187	1074	660	184	1116	461
d1, Uniform Delay [s]	53.93	32.60	26.76	53.93	33.72	21.62	50.20	40.74	19.87	52.90	37.92	30.27
k, delay calibration	0.44	0.50	0.50	0.11	0.50	0.50	0.11	0.20	0.26	0.18	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	167.91	1.20	9.33	48.88	1.67	2.55	1.15	5.91	0.40	14.55	2.61	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.31	0.53	0.81	1.08	0.61	0.51	0.36	0.91	0.22	0.83	0.78	0.16
d, Delay for Lane Group [s/veh]	221.83	33.80	36.09	102.80	35.39	24.17	51.35	46.65	20.27	67.46	40.54	30.61
Lane Group LOS	F	C	D	F	D	C	D	D	C	E	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	14.35	7.09	16.13	7.80	8.62	7.51	1.93	14.49	2.54	5.23	11.90	1.60
50th-Percentile Queue Length [ft]	358.72	177.36	403.20	195.12	215.48	187.80	48.13	362.18	63.50	130.81	297.38	39.97
95th-Percentile Queue Length [veh]	22.67	11.46	22.71	12.77	13.43	12.01	3.47	20.73	4.57	8.98	17.55	2.88
95th-Percentile Queue Length [ft]	566.64	286.57	567.85	319.35	335.85	300.17	86.64	518.23	114.30	224.60	438.78	71.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	221.83	33.80	36.09	102.80	35.39	24.17	51.35	46.65	20.27	67.46	40.54	30.61
Movement LOS	F	C	D	F	D	C	D	D	C	E	D	C
d_A, Approach Delay [s/veh]	61.04			47.74			43.65			43.61		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	50.11											
Intersection LOS	D											
Intersection V/C	0.808											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	688	400	658	1115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	688	400	658	1115
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	192	111	174	296
Total Analysis Volume [veh/h]	0	0	766	445	698	1182
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.24	0.31	0.44	0.37
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	11.55	12.79	29.72	0.19
k, delay calibration	0.50	0.50	0.30	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	2.87	137.95	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.43	0.56	1.29	0.39
d, Delay for Lane Group [s/veh]	12.31	15.66	167.67	0.58
Lane Group LOS	B	B	F	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.29	5.91	31.78	0.16
50th-Percentile Queue Length [ft]	107.20	147.69	794.60	4.00
95th-Percentile Queue Length [veh]	7.68	9.89	47.60	0.29
95th-Percentile Queue Length [ft]	192.10	247.34	1190.10	7.20



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	12.31	15.66	167.67	0.58
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		13.54		62.62	
Approach LOS	A		B		E	
d_I, Intersection Delay [s/veh]	43.39					
Intersection LOS	D					
Intersection V/C	0.751					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	70	1161	70	176	987	80	90	380	278	130	500	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1161	70	176	987	80	90	380	278	130	500	50
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	342	21	48	271	22	24	100	73	35	136	14
Total Analysis Volume [veh/h]	82	1368	82	194	1086	88	95	400	293	142	545	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	37	0	15	52	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	50	50	50	31	31	31	31	31	31
g / C, Green / Cycle	0.40	0.40	0.40	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.18	0.43	0.06	0.29	0.34	0.07	0.13	0.13	0.22	0.16	0.18	0.19
s, saturation flow rate [veh/h]	465	3192	1407	666	3192	1349	718	3192	1331	862	1676	1583
c, Capacity [veh/h]	146	1261	556	345	1776	751	202	1090	455	275	572	541
d1, Uniform Delay [s]	39.86	27.26	17.51	18.31	13.44	9.48	35.77	22.34	25.06	32.25	23.87	24.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.63	51.67	0.56	6.48	1.58	0.32	1.70	0.21	1.54	1.49	0.77	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.56	1.08	0.15	0.56	0.61	0.12	0.47	0.37	0.64	0.52	0.53	0.55
d, Delay for Lane Group [s/veh]	54.49	78.92	18.07	24.78	15.02	9.80	37.47	22.55	26.59	33.74	24.64	24.88
Lane Group LOS	D	F	B	C	B	A	D	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.41	21.81	1.15	2.48	7.15	0.84	2.05	3.14	5.30	2.91	5.17	5.06
50th-Percentile Queue Length [ft]	60.23	545.32	28.82	62.08	178.66	20.98	51.34	78.49	132.53	72.83	129.24	126.46
95th-Percentile Queue Length [veh]	4.34	31.17	2.07	4.47	11.53	1.51	3.70	5.65	9.08	5.24	8.90	8.75
95th-Percentile Queue Length [ft]	108.41	779.14	51.87	111.74	288.26	37.76	92.41	141.28	226.93	131.09	222.46	218.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	54.49	78.92	18.07	24.78	15.02	9.80	37.47	22.55	26.59	33.74	24.74	24.88
Movement LOS	D	F	B	C	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	74.36			16.07			25.85			26.48		
Approach LOS	E			B			C			C		
d_I, Intersection Delay [s/veh]	39.71											
Intersection LOS	D											
Intersection V/C	0.721											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	178	1046	60	80	1024	100	60	460	140	40	500	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	178	1046	60	80	1024	100	60	460	140	40	500	66
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	289	17	21	263	26	18	141	43	11	141	19
Total Analysis Volume [veh/h]	197	1157	66	82	1051	103	74	565	172	45	562	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.45	0.25	0.25	0.20	0.24	0.24	0.10	0.34	0.12	0.06	0.39
s, saturation flow rate [veh/h]	437	3192	1627	409	3192	1594	710	1676	1406	758	1640
c, Capacity [veh/h]	206	1583	806	193	1583	790	86	705	591	142	690
d1, Uniform Delay [s]	42.37	18.73	18.75	32.64	18.41	18.44	54.55	27.86	21.04	47.23	30.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.28	0.04	0.04	0.39
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	52.28	1.18	2.32	6.75	1.07	2.15	8.93	5.47	0.10	0.47	16.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.96	0.51	0.51	0.43	0.49	0.49	0.86	0.80	0.29	0.32	0.92
d, Delay for Lane Group [s/veh]	94.64	19.91	21.07	39.39	19.48	20.60	63.48	33.33	21.14	47.69	46.53
Lane Group LOS	F	B	C	D	B	C	E	C	C	D	D
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	8.44	7.06	7.47	2.23	6.58	6.85	2.26	13.69	2.92	1.19	18.51
50th-Percentile Queue Length [ft]	211.07	176.51	186.85	55.65	164.47	171.36	56.53	342.15	72.93	29.83	462.81
95th-Percentile Queue Length [veh]	13.21	11.42	11.96	4.01	10.79	11.15	4.07	19.75	5.25	2.15	25.57
95th-Percentile Queue Length [ft]	330.20	285.46	298.94	100.17	269.63	278.70	101.76	493.83	131.27	53.70	639.21

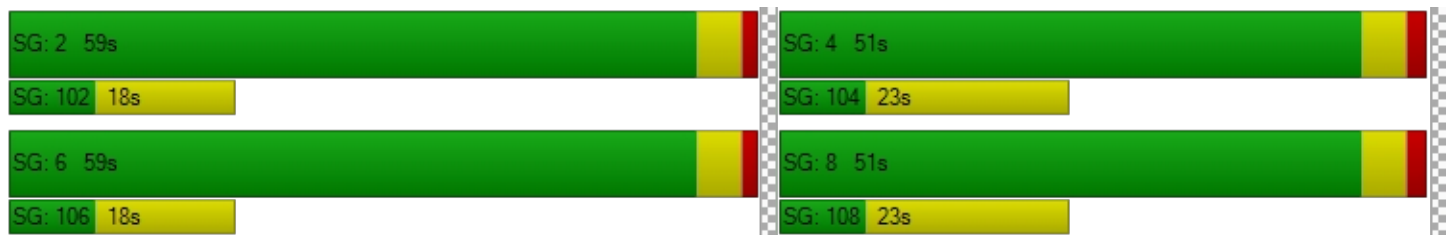


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	94.64	20.26	21.07	39.39	19.78	20.60	63.48	33.33	21.14	47.69	46.53	46.53
Movement LOS	F	C	C	D	B	C	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	30.62			21.15			33.49			46.60		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	30.98											
Intersection LOS	C											
Intersection V/C	0.839											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	148.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.851

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	100	890	830	140	410	30	330	888	150	50	1405	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	890	830	140	410	30	330	888	150	50	1405	180
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	228	213	39	114	8	89	241	41	13	370	47
Total Analysis Volume [veh/h]	102	912	850	155	455	33	358	962	163	53	1478	189
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	59	46	57	59	48	48	54	46	46	54	42	51
g / C, Green / Cycle	0.49	0.38	0.47	0.49	0.40	0.40	0.45	0.38	0.38	0.45	0.35	0.43
(v / s)_i Volume / Saturation Flow Rate	0.10	0.33	0.68	0.20	0.13	0.13	0.64	0.34	0.34	0.08	0.52	0.12
s, saturation flow rate [veh/h]	1058	2800	1253	767	1863	1817	563	1500	1808	648	2856	1576
c, Capacity [veh/h]	529	1062	598	279	749	731	210	567	684	214	989	683
d1, Uniform Delay [s]	17.53	34.32	32.04	25.32	24.74	24.75	47.33	35.03	35.33	26.68	39.26	21.94
k, delay calibration	0.12	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	2.15	199.21	1.73	0.25	0.26	335.52	18.79	17.86	2.74	227.64	1.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

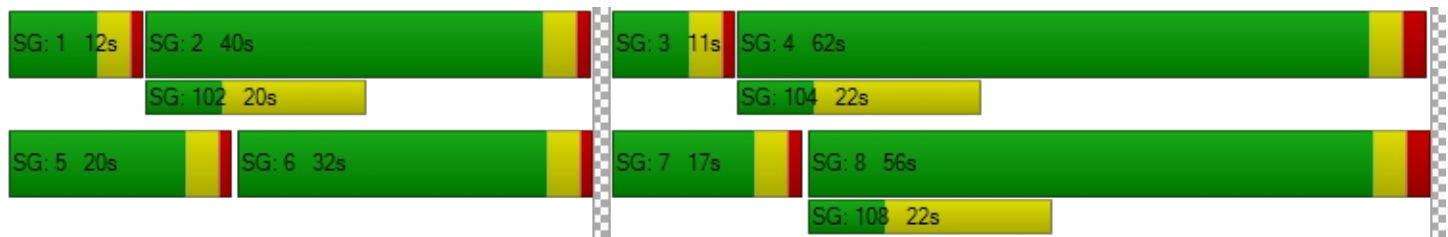
X, volume / capacity	0.19	0.86	1.42	0.56	0.33	0.33	1.70	0.89	0.91	0.25	1.49	0.28
d, Delay for Lane Group [s/veh]	17.72	36.47	231.25	27.05	24.99	25.01	382.85	53.82	53.19	29.42	266.90	22.95
Lane Group LOS	B	D	F	C	C	C	F	D	D	C	F	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.55	12.22	49.50	2.63	4.90	4.80	23.37	16.21	19.76	1.01	45.40	3.58
50th-Percentile Queue Length [ft]	38.86	305.39	1237.47	65.86	122.50	120.04	584.27	405.13	494.02	25.26	1135.10	89.53
95th-Percentile Queue Length [veh]	2.80	17.95	75.90	4.74	8.53	8.40	40.44	22.81	27.05	1.82	70.03	6.45
95th-Percentile Queue Length [ft]	69.95	448.69	1897.50	118.55	213.25	209.88	1010.91	570.18	676.28	45.47	1750.85	161.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.72	36.47	231.25	27.05	25.00	25.01	382.85	53.52	53.19	29.42	266.90	22.95
Movement LOS	B	D	F	C	C	C	F	D	D	C	F	C
d_A, Approach Delay [s/veh]	124.27			25.50			132.99			232.77		
Approach LOS	F			C			F			F		
d_I, Intersection Delay [s/veh]	148.09											
Intersection LOS	F											
Intersection V/C	0.851											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	260	74	50	100	40	30	864	40	90	794	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	260	74	50	100	40	30	864	40	90	794	30
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	72	20	15	30	12	8	230	11	28	246	9
Total Analysis Volume [veh/h]	55	288	82	60	120	48	32	920	43	111	984	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	54	54	54	54
g / C, Green / Cycle	0.29	0.29	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.30	0.25	0.38	0.38	0.51	0.50
s, saturation flow rate [veh/h]	1429	919	1140	1500	737	1509
c, Capacity [veh/h]	464	320	732	907	497	912
d1, Uniform Delay [s]	31.68	27.59	11.18	11.30	18.37	14.16
k, delay calibration	0.36	0.25	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	19.76	6.65	3.42	3.24	9.97	8.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.92	0.71	0.59	0.62	0.75	0.83
d, Delay for Lane Group [s/veh]	51.44	34.24	14.59	14.54	28.35	22.94
Lane Group LOS	D	C	B	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	11.52	4.88	4.60	6.97	7.79	12.57
50th-Percentile Queue Length [ft]	287.89	121.89	114.91	174.32	194.87	314.22
95th-Percentile Queue Length [veh]	17.08	8.50	8.11	11.30	12.37	18.38
95th-Percentile Queue Length [ft]	427.02	212.43	202.82	282.59	309.34	459.58



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.44	51.44	51.44	34.24	34.24	34.24	14.59	14.56	14.54	28.35	24.38	22.94
Movement LOS	D	D	D	C	C	C	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	51.44			34.24			14.56			24.72		
Approach LOS	D			C			B			C		
d_I, Intersection Delay [s/veh]	25.95											
Intersection LOS	C											
Intersection V/C	0.804											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	27.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.166

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗ ↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	529	510	0	23	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	529	510	0	23	60
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	152	147	0	8	21
Total Analysis Volume [veh/h]	0	609	587	0	32	84
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.17	0.18
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	27.39	14.15
Movement LOS		A	A		D	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.58	0.63
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	14.53	15.82
d_A, Approach Delay [s/veh]	0.00		0.00		17.80	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.57					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	9	519	567	19	6	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	519	567	19	6	7
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	146	161	5	2	2
Total Analysis Volume [veh/h]	9	584	644	19	8	9
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.04	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.76	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.14		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	A					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.818

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	40	460	10	10	269	10	0	0	0	20	10	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	460	10	10	269	10	0	0	0	20	10	31
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	146	3	3	76	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	51	583	13	11	304	11	0	0	0	27	13	41
Pedestrian Volume [ped/h]	35			23			5			6		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	792	740	569	616
Degree of Utilization, x	0.82	0.44	0.00	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	8.98	2.26	0.00	0.45
95th-Percentile Queue Length [ft]	224.47	56.57	0.00	11.29
Approach Delay [s/veh]	24.46	11.64	0.00	9.73
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	19.36			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.694

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	21	435	10	0	247	10	10	10	10	20	0	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	435	10	0	247	10	10	10	10	20	0	21
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	125	3	0	79	3	4	4	4	7	0	7
Total Analysis Volume [veh/h]	24	502	12	0	317	13	18	18	18	28	0	29
Pedestrian Volume [ped/h]	27			6			6			25		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	775	742	609	618
Degree of Utilization, x	0.69	0.44	0.09	0.09

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	5.71	2.30	0.29	0.30
95th-Percentile Queue Length [ft]	142.68	57.52	7.27	7.60
Approach Delay [s/veh]	17.48	11.68	9.49	9.42
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	14.61			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	27	11	1	6	4	322	14	25	346	8
Total Analysis Volume [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	93	83	83	93	86	86
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.77	0.70	0.70	0.77	0.72	0.72
(v / s)_j Volume / Saturation Flow Rate	0.04	0.07	0.03	0.02	0.04	0.36	0.36	0.19	0.38	0.38
s, saturation flow rate [veh/h]	1336	1497	1256	1531	450	1870	1837	517	1870	1853
c, Capacity [veh/h]	215	224	143	229	373	1300	1277	420	1343	1330
d1, Uniform Delay [s]	48.94	46.68	54.11	44.15	4.94	8.72	8.75	5.59	7.69	7.71
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.58	0.42	0.08	0.22	1.48	1.53	1.32	1.49	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.47	0.29	0.12	0.04	0.52	0.52	0.24	0.53	0.53
d, Delay for Lane Group [s/veh]	49.18	47.25	54.53	44.23	5.16	10.21	10.28	6.90	9.18	9.22
Lane Group LOS	D	D	D	D	A	B	B	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.57	2.94	1.24	0.70	0.10	8.22	8.16	0.64	8.00	7.99
50th-Percentile Queue Length [ft]	39.19	73.49	31.09	17.62	2.44	205.44	203.93	16.06	200.10	199.74
95th-Percentile Queue Length [veh]	2.82	5.29	2.24	1.27	0.18	12.92	12.84	1.16	12.64	12.63
95th-Percentile Queue Length [ft]	70.54	132.28	55.96	31.72	4.40	322.97	321.03	28.91	316.10	315.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.18	47.25	47.25	54.53	44.23	44.23	5.16	10.24	10.28	6.90	9.20	9.22
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	47.92			50.50			10.18			9.05		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	12.50											
Intersection LOS	B											
Intersection V/C	0.454											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	337.54	499.34	545.21	455.88
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.158	2.008	2.944	2.948
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.827	1.673	2.679	2.809
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.178

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	27	41	0	663	719	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	41	0	663	719	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	10	0	166	180	0
Total Analysis Volume [veh/h]	27	41	0	663	719	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.18	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	33.89	14.77	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh]	0.63	0.33	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	15.66	8.29	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.36		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.05					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	0	63	0	0	0	4	339	15	44	357	8
Total Analysis Volume [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	22	22		89	77	77	89	81	81
g / C, Green / Cycle	0.18	0.18		0.74	0.64	0.64	0.74	0.68	0.68
(v / s)_j Volume / Saturation Flow Rate	0.05	0.17		0.03	0.38	0.38	0.33	0.39	0.39
s, saturation flow rate [veh/h]	1722	1510		451	1870	1835	532	1870	1852
c, Capacity [veh/h]	314	275		346	1203	1181	398	1269	1257
d1, Uniform Delay [s]	42.21	48.15		6.94	12.30	12.35	10.25	10.15	10.18
k, delay calibration	0.04	0.24		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	22.11		0.24	2.14	2.22	3.54	1.90	1.94
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.92		0.04	0.59	0.60	0.44	0.58	0.58
d, Delay for Lane Group [s/veh]	42.39	70.26		7.17	14.44	14.57	13.79	12.05	12.13
Lane Group LOS	D	E		A	B	B	B	B	B
Critical Lane Group	No	Yes		No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.25	9.09		0.11	11.04	10.97	1.52	10.02	10.03
50th-Percentile Queue Length [ft]	56.17	227.33		2.74	275.89	274.34	37.88	250.56	250.63
95th-Percentile Queue Length [veh]	4.04	14.04		0.20	16.48	16.41	2.73	15.21	15.22
95th-Percentile Queue Length [ft]	101.11	350.96		4.94	412.09	410.16	68.19	380.36	380.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.39	70.26	70.26	0.00	0.00	0.00	7.17	14.50	14.57	13.79	12.09	12.13
Movement LOS	D	E	E				A	B	B	B	B	B
d_A, Approach Delay [s/veh]	63.13			0.00			14.42			12.27		
Approach LOS	E			A			B			B		
d_I, Intersection Delay [s/veh]	18.26											
Intersection LOS	B											
Intersection V/C	0.584											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	37.49	146.62	386.92	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.307	1.497	2.888	2.946
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	2.121	4.132	2.739	2.907
Bicycle LOS	B	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	524	567	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	524	567	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	131	142	1
Total Analysis Volume [veh/h]	5	2	1	524	567	4
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	21.29	12.23	8.66	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.07	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	1.69	0.30	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.70		0.02		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	C					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.454

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	27	11	1	6	4	322	14	25	346	8
Total Analysis Volume [veh/h]	56	0	106	42	3	24	16	1287	54	99	1385	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	93	83	83	93	86	86
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.77	0.70	0.70	0.77	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.03	0.02	0.04	0.36	0.36	0.19	0.38	0.38
s, saturation flow rate [veh/h]	1336	1497	1256	1531	450	1870	1837	517	1870	1853
c, Capacity [veh/h]	215	224	143	229	373	1300	1277	420	1343	1330
d1, Uniform Delay [s]	48.94	46.68	54.11	44.15	4.94	8.72	8.75	5.59	7.69	7.71
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	0.58	0.42	0.08	0.22	1.48	1.53	1.32	1.49	1.52
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.47	0.29	0.12	0.04	0.52	0.52	0.24	0.53	0.53
d, Delay for Lane Group [s/veh]	49.18	47.25	54.53	44.23	5.16	10.21	10.28	6.90	9.18	9.22
Lane Group LOS	D	D	D	D	A	B	B	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.57	2.94	1.24	0.70	0.10	8.22	8.16	0.64	8.00	7.99
50th-Percentile Queue Length [ft/ln]	39.19	73.49	31.09	17.62	2.44	205.44	203.93	16.06	200.10	199.74
95th-Percentile Queue Length [veh/ln]	2.82	5.29	2.24	1.27	0.18	12.92	12.84	1.16	12.64	12.63
95th-Percentile Queue Length [ft/ln]	70.54	132.28	55.96	31.72	4.40	322.97	321.03	28.91	316.10	315.63



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.18	47.25	47.25	54.53	44.23	44.23	5.16	10.24	10.28	6.90	9.20	9.22
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	47.92			50.50			10.18			9.05		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	12.50											
Intersection LOS	B											
Intersection V/C	0.454											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0			11.0			11.0			11.0		
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	337.54			499.34			545.21			455.88		
d_p, Pedestrian Delay [s]	49.50			49.50			49.50			49.50		
I_p,int, Pedestrian LOS Score for Intersection	2.158			2.008			2.944			2.948		
Crosswalk LOS	B			B			C			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	490			490			1123			1123		
d_b, Bicycle Delay [s]	34.29			34.29			11.56			11.56		
I_b,int, Bicycle LOS Score for Intersection	1.827			1.673			2.679			2.809		
Bicycle LOS	A			A			B			C		

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	33.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.178

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	27	41	0	663	719	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	41	0	663	719	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	10	0	166	180	0
Total Analysis Volume [veh/h]	27	41	0	663	719	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.18	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	33.89	14.77	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh/ln]	0.63	0.33	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	15.66	8.29	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.36		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.05					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	0	63	0	0	0	4	339	15	44	357	8
Total Analysis Volume [veh/h]	87	0	253	0	0	0	15	1355	60	176	1426	31
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23		88	76	76	88	80	80
g / C, Green / Cycle	0.19	0.19		0.73	0.63	0.63	0.73	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17		0.03	0.38	0.38	0.33	0.39	0.39
s, saturation flow rate [veh/h]	1726	1513		453	1870	1835	534	1870	1852
c, Capacity [veh/h]	333	292		340	1184	1162	391	1250	1238
d1, Uniform Delay [s]	41.13	46.90		7.46	13.03	13.09	10.96	10.82	10.86
k, delay calibration	0.04	0.24		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	15.27		0.24	2.26	2.35	3.71	2.00	2.05
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.87		0.04	0.60	0.61	0.45	0.58	0.59
d, Delay for Lane Group [s/veh]	41.29	62.18		7.71	15.29	15.44	14.67	12.82	12.91
Lane Group LOS	D	E		A	B	B	B	B	B
Critical Lane Group	No	Yes		No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.21	8.53		0.12	11.47	11.40	1.59	10.46	10.47
50th-Percentile Queue Length [ft/ln]	55.34	213.28		2.89	286.63	285.04	39.87	261.62	261.70
95th-Percentile Queue Length [veh/ln]	3.98	13.32		0.21	17.02	16.94	2.87	15.77	15.77
95th-Percentile Queue Length [ft/ln]	99.61	333.03		5.19	425.46	423.48	71.77	394.25	394.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.29	62.18	62.18	0.00	0.00	0.00	7.71	15.36	15.44	14.67	12.87	12.91
Movement LOS	D	E	E				A	B	B	B	B	B
d_A, Approach Delay [s/veh]	56.83			0.00			15.28			13.06		
Approach LOS	E			A			B			B		
d_I, Intersection Delay [s/veh]	18.37											
Intersection LOS	B											
Intersection V/C	0.585											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	40.67	147.02	386.92	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.304	1.497	2.888	2.946
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	2.121	4.132	2.739	2.907
Bicycle LOS	B	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	524	567	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	524	567	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	131	142	1
Total Analysis Volume [veh/h]	5	2	1	524	567	4
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	21.29	12.23	8.66	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.69	0.30	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.70		0.02		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	C					



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** San Vicente Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	83	1	83	116	1	116
	↵↔ Left-Through		0			0	
	→ Through	170	1	170	370	1	370
	↘ Through-Right		0			0	
	↘ Right	124	1	45	161	1	88
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	260	1	260	190	1	190
	↵↔ Left-Through		0			0	
	→ Through	280	1	280	260	1	260
	↘ Through-Right		0			0	
	↘ Right	150	1	120	130	1	85
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	60	1	60	90	1	90
	↵↔ Left-Through		0			0	
	→ Through	874	2	437	697	2	349
	↘ Through-Right		0			0	
	↘ Right	86	1	45	74	1	16
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	158	1	158	146	1	146
	↵↔ Left-Through		0			0	
	→ Through	816	2	408	804	2	402
	↘ Through-Right		0			0	
	↘ Right	150	1	20	250	1	155
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 450			<i>North-South:</i> 630
				<i>East-West:</i> 595			<i>East-West:</i> 495
				<i>SUM:</i> 1045			<i>SUM:</i> 1125
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.760			0.818
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.660</b>			<b>0.718</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 2	WB-- 2	2	EB-- 2	WB-- 2	2
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	0	70	40	0	40
	↵↔ Left-Through		1			1	
	→ Through	90	0	160	80	0	120
	↘ Through-Right		0			0	
	↘ Right	10	1	0	30	1	15
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	170	0	170	160	0	160
	↵↔ Left-Through		1			1	
	→ Through	60	0	230	60	0	220
	↘ Through-Right		0			0	
	↘ Right	20	1	5	40	1	20
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	990	1	510	1187	1	624
	↘ Through-Right		1			1	
	↘ Right	30	0	30	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	20	1	20	30	1	30
	↵↔ Left-Through		0			0	
	→ Through	1274	1	712	1263	1	662
	↘ Through-Right		1			1	
	↘ Right	150	0	150	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 330			<i>North-South:</i> 280
				<i>East-West:</i> 742			<i>East-West:</i> 702
				<b>SUM:</b> 1072			<b>SUM:</b> 982
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.715			0.655
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.615</b>			<b>0.555</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	180	1	180	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	70	1	70	100	1	100
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1200	1	660	1247	1	679
	↗ Through-Right		1			1	
	↘ Right	120	0	120	110	0	110
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	60	1	60	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1424	2	712	1253	2	627
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 180			<i>North-South:</i> 240
				<i>East-West:</i> 720			<i>East-West:</i> 749
				<i>SUM:</i> 900			<i>SUM:</i> 989
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.600			0.659
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.500</b>			<b>0.559</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	139	0	139	92	0	92
	↵↔ Left-Through		0			0	
	→ Through	290	0	479	380	0	562
	↘ Through-Right		0			0	
	↘ Right	50	0	0	90	0	0
	↘↔ Left-Through-Right		1			1	
	↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	0	30	100	0	100
	↵↔ Left-Through		0			0	
	→ Through	200	0	270	280	0	430
	↘ Through-Right		0			0	
	↘ Right	40	0	0	50	0	0
	↘↔ Left-Through-Right		1			1	
	↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	20	1	20
	↵↔ Left-Through		0			0	
	→ Through	814	1	456	1026	1	562
	↘ Through-Right		1			1	
	↘ Right	97	0	97	97	0	97
	↘↔ Left-Through-Right		0			0	
	↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	1436	1	768	1008	1	534
	↘ Through-Right		1			1	
	↘ Right	100	0	100	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 509			<i>North-South:</i> 662
				<i>East-West:</i> 788			<i>East-West:</i> 602
				<b>SUM:</b> 1297			<b>SUM:</b> 1264
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.865			0.843
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.765</b>			<b>0.743</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>C</b>



# Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Broadway

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	70	0	70
	Left-Through		0			0	
	Through	439	0	559	502	0	632
	Through-Right		0			0	
	Right	50	0	0	60	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	10	0	10	30	0	30
	Left-Through		0			0	
	Through	367	0	397	407	0	457
	Through-Right		0			0	
	Right	20	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	179	0	299	356	0	466
	Through-Right		1			1	
	Right	120	0	0	110	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	30	1	30	30	1	30
	Left-Through		0			0	
	Through	224	1	224	150	1	150
	Through-Right		0			0	
	Right	20	1	20	30	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		569	<i>North-South:</i>		662
		<i>East-West:</i>		329	<i>East-West:</i>		496
		<i>SUM:</i>		898	<i>SUM:</i>		1158
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.599			0.772
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.499</b>			<b>0.672</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	537	2	295	727	2	400
	↵↔ Left-Through		0			0	
	→ Through	10	0	60	10	0	120
	↵↔ Through-Right		1			1	
	↵ Right	50	0	0	110	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1009	1	510	1359	1	685
	↵↔ Through-Right		1			1	
	↵ Right	10	0	10	10	0	10
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	10	1	10	10	1	10
	↵↔ Left-Through		0			0	
	→ Through	1585	2	793	1382	2	691
	↵↔ Through-Right		0			0	
	↵ Right	729	1	434	682	1	282
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 295			<i>North-South:</i> 400
				<i>East-West:</i> 833			<i>East-West:</i> 751
				<b>SUM:</b> 1128			<b>SUM:</b> 1151
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.752			0.767
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.652</b>			<b>0.667</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	771	1	476	488	1	314
	↵↔ Left-Through		0			0	
	→ Through	0	0	476	0	0	314
	↗ Through-Right		0			0	
	↘ Right	180	0	0	140	0	0
	↗↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↗↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↔ Left-Through		0			0	
	→ Through	989	3	330	1413	3	471
	↗ Through-Right		0			0	
	↘ Right	327	1	0	623	1	309
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	140	1	140	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	1483	2	494	1365	2	455
	↗ Through-Right		1			1	
	↘ Right	0	0	0	0	0	0
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 476			<i>North-South:</i> 314
				<i>East-West:</i> 494			<i>East-West:</i> 521
				<i>SUM:</i> 970			<i>SUM:</i> 835
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.681			0.586
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.581</b>			<b>0.486</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 2	2	NB-- 2	SB-- 2	2
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	420	1	420	420	1	420
	↵↔ Left-Through		0			0	
	→ Through	510	1	510	230	1	230
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	347	1	347	643	1	643
	↘ Through-Right		0			0	
	↘ Right	80	1	80	80	1	80
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	631	1	631	308	1	308
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	330	1	0	280	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 767			<i>North-South:</i> 1063
				<i>East-West:</i> 631			<i>East-West:</i> 308
				<i>SUM:</i> 1398			<i>SUM:</i> 1371
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.981			0.962
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.881</b>			<b>0.862</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Texas Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	0	70	30	0	30
	↵↔ Left-Through		1		1		
	→ Through	851	0	576	864	0	512
	↗ Through-Right		1		1		
	↘ Right	20	0	576	40	0	512
	↗↘ Left-Through-Right		0		0		
	↗↘ Left-Right		0		0		
<b>SOUTHBOUND</b>	↵ Left	20	0	20	90	0	90
	↵↔ Left-Through		1		1		
	→ Through	769	0	435	794	0	592
	↗ Through-Right		1		1		
	↘ Right	20	0	435	30	0	592
	↗↘ Left-Through-Right		0		0		
	↗↘ Left-Right		0		0		
<b>EASTBOUND</b>	↵ Left	30	0	30	50	0	50
	↵↔ Left-Through		0		0		
	→ Through	80	0	192	260	0	384
	↗ Through-Right		0		0		
	↘ Right	82	0	0	74	0	0
	↗↘ Left-Through-Right		1		1		
	↗↘ Left-Right		0		0		
<b>WESTBOUND</b>	↵ Left	50	0	50	50	0	50
	↵↔ Left-Through		0		0		
	→ Through	90	0	200	100	0	190
	↗ Through-Right		0		0		
	↘ Right	60	0	0	40	0	0
	↗↘ Left-Through-Right		1		1		
	↗↘ Left-Right		0		0		
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		596	<i>North-South:</i>		622
		<i>East-West:</i>		242	<i>East-West:</i>		434
		<b>SUM:</b>		838	<b>SUM:</b>		1056
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.559			0.704
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.459</b>			<b>0.604</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				4			4
		0		0	0		0
		0		0	0		0
		2		2	2		2
		0		0	0		0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	160	1	160	160	1	160
	↷ Left-Through		0			0	
	→ Through	720	1	426	840	1	477
	↷ Through-Right		1			1	
	↘ Right	131	0	131	114	0	114
	↷ Left-Through-Right		0			0	
	↷ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	110	1	110	70	1	70
	↷ Left-Through		0			0	
	→ Through	790	1	440	750	1	410
	↷ Through-Right		1			1	
	↘ Right	90	0	90	70	0	70
	↷ Left-Through-Right		0			0	
	↷ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	40	1	40	0	1	0
	↷ Left-Through		0			0	
	→ Through	900	2	450	577	2	289
	↷ Through-Right		0			0	
	↘ Right	80	1	0	110	1	30
	↷ Left-Through-Right		0			0	
	↷ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	139	1	139	164	1	164
	↷ Left-Through		0			0	
	→ Through	1004	2	502	913	2	457
	↷ Through-Right		0			0	
	↘ Right	90	1	35	110	1	75
	↷ Left-Through-Right		0			0	
	↷ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 600			<i>North-South:</i> 570
				<i>East-West:</i> 589			<i>East-West:</i> 457
				<i>SUM:</i> 1189			<i>SUM:</i> 1027
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.865			0.747
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.765</b>			<b>0.647</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	82	1	82	139	1	139
	↵↵ Left-Through		0			0	
	→ Through	900	2	450	993	2	497
	↵↵↵ Through-Right		0			0	
	↵ Right	70	1	70	120	1	120
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↵ Left	60	1	60	60	1	60
	↵↵ Left-Through		0			0	
	→ Through	760	1	431	777	1	414
	↵↵ Through-Right		1			1	
	↵ Right	102	0	102	51	0	51
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	51	1	51	182	1	182
	↵↵ Left-Through		0			0	
	→ Through	759	1	457	1015	1	548
	↵↵ Through-Right		1			1	
	↵ Right	155	0	155	80	0	80
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↵ Left-Through		0			0	
	→ Through	1062	2	381	939	2	340
	↵↵ Through-Right		1			1	
	↵ Right	80	0	80	80	0	80
	↵↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 513			<i>North-South:</i> 557
				<i>East-West:</i> 457			<i>East-West:</i> 548
				<i>SUM:</i> 970			<i>SUM:</i> 1105
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.647			0.737
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.547</b>			<b>0.637</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	1	70	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	963	2	348	1055	2	385
	↘ Through-Right		1			1	
	↘ Right	80	0	80	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	870	1	502	837	1	464
	↘ Through-Right		1			1	
	↘ Right	134	0	134	90	0	90
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	99	1	99	166	1	166
	↵↔ Left-Through		0			0	
	→ Through	130	0	230	190	0	350
	↘ Through-Right		1			1	
	↘ Right	100	0	0	160	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	140	1	140	140	1	140
	↵↔ Left-Through		0			0	
	→ Through	170	1	170	60	1	60
	↘ Through-Right		0			0	
	↘ Right	10	1	10	10	1	10
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 572			<i>North-South:</i> 514
				<i>East-West:</i> 370			<i>East-West:</i> 490
				<b>SUM:</b> 942			<b>SUM:</b> 1004
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.628			0.669
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.528</b>			<b>0.569</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
				4			4
No. of Phases				0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 3	<b>SB--</b> 1	3	<b>NB--</b> 3	<b>SB--</b> 1	3
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 3	2	<b>EB--</b> 3	<b>WB--</b> 3	2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	178	1	178	64	1	64
	Left-Through		0			0	
	Through	952	2	476	929	2	465
	Through-Right		0			0	
	Right	160	1	55	140	1	0
	Left-Through-Right		0			0	
<b>SOUTHBOUND</b>	Left	280	1	280	130	1	130
	Left-Through		0			0	
	Through	817	2	409	744	2	372
	Through-Right		0			0	
	Right	123	1	0	63	1	0
	Left-Through-Right		0			0	
<b>EASTBOUND</b>	Left	112	1	112	216	1	216
	Left-Through		0			0	
	Through	758	3	253	783	3	261
	Through-Right		0			0	
	Right	110	1	0	534	1	470
	Left-Through-Right		0			0	
<b>WESTBOUND</b>	Left	190	2	105	360	2	198
	Left-Through		0			0	
	Through	1192	3	397	958	3	319
	Through-Right		0			0	
	Right	300	1	20	340	1	210
	Left-Through-Right		0			0	
<b>CRITICAL VOLUMES</b>				756			595
				509			668
				1265			1263
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.920			0.919
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.820			0.819
<b>LEVEL OF SERVICE (LOS):</b>				D			D



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ocean Park Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	660	1	660	330	1	330
	↶↷ Left-Through		0			0	
	↷ Through	1520	1	845	888	1	519
	↷↶ Through-Right		1			1	
	↷ Right	170	0	170	150	0	150
	↷↷ Left-Through-Right		0			0	
	↷↷ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	30	1	30	50	1	50
	↷↷ Left-Through		0			0	
	↷ Through	686	2	343	1405	2	703
	↷↶ Through-Right		0			0	
	↷ Right	340	1	320	180	1	130
	↷↷ Left-Through-Right		0			0	
	↷↷ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	40	1	40	100	1	100
	↶↷ Left-Through		0			0	
	↷ Through	350	2	175	890	2	445
	↷↶ Through-Right		0			0	
	↷ Right	320	1	0	830	1	665
	↷↷ Left-Through-Right		0			0	
	↷↷ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	70	1	70	140	1	140
	↶↷ Left-Through		0			0	
	↷ Through	620	1	340	410	1	220
	↷↶ Through-Right		1			1	
	↷ Right	60	0	60	30	0	30
	↷↷ Left-Through-Right		0			0	
	↷↷ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1003			<i>North-South:</i> 1033
				<i>East-West:</i> 380			<i>East-West:</i> 805
				<i>SUM:</i> 1383			<i>SUM:</i> 1838
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.006			1.337
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.906</b>			<b>1.237</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>E</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 EB On-Ramp

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1010	2	505	688	2	344
	↗ Through-Right		0			0	
	↘ Right	520	1	520	400	1	400
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	567	1	567	658	1	658
	↵↔ Left-Through		0			0	
	→ Through	1046	2	523	1115	2	558
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		1087	<i>North-South:</i>		1058
		<i>East-West:</i>		0	<i>East-West:</i>		0
		<b>SUM:</b>		1087	<b>SUM:</b>		1058
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.725			0.705
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.625</b>			<b>0.605</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	150	1	150	90	1	90
	↵↔ Left-Through		0			0	
	→ Through	370	2	185	380	2	190
	↵↔ Through-Right		0			0	
	↵ Right	123	1	0	278	1	190
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	210	1	210	130	1	130
	↵↔ Left-Through		0			0	
	→ Through	270	1	170	500	1	275
	↵↔ Through-Right		1			1	
	↵ Right	70	0	70	50	0	50
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1401	2	701	1161	2	581
	↵↔ Through-Right		0			0	
	↵ Right	30	1	0	70	1	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	283	1	283	176	1	176
	↵↔ Left-Through		0			0	
	→ Through	1174	2	587	987	2	494
	↵↔ Through-Right		0			0	
	↵ Right	60	1	0	80	1	15
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		395	<i>North-South:</i>		365
		<i>East-West:</i>		984	<i>East-West:</i>		757
		<b>SUM:</b>		1379	<b>SUM:</b>		1122
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.968			0.787
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.868</b>			<b>0.687</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Approval Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	60	1	60	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	550	1	550	460	1	460
	↘ Through-Right		0			0	
	↘ Right	90	1	30	140	1	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	500	0	593	500	0	566
	↘ Through-Right		1			1	
	↘ Right	93	0	0	66	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	93	1	93	178	1	178
	↵↔ Left-Through		0			0	
	→ Through	986	2	345	1046	2	369
	↘ Through-Right		1			1	
	↘ Right	50	0	50	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	120	1	120	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1217	2	419	1024	2	375
	↘ Through-Right		1			1	
	↘ Right	40	0	40	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		660	<i>North-South:</i>		626
		<i>East-West:</i>		512	<i>East-West:</i>		553
		<i>SUM:</i>		1172	<i>SUM:</i>		1179
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.781			0.786
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.681</b>			<b>0.686</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**INTERIM YEAR (2031) NO PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	110	360	30	90	50	210	390	80	20	380	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	110	360	30	90	50	210	390	80	20	380	120
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	30	98	8	24	13	59	110	22	5	103	33
Total Analysis Volume [veh/h]	43	119	391	32	97	54	236	438	90	22	413	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	58	27	27	31	51	51	3	23	23
g / C, Green / Cycle	0.30	0.65	0.30	0.30	0.34	0.56	0.56	0.03	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.42	0.25	0.31	0.04	0.13	0.23	0.06	0.01	0.22	0.11
s, saturation flow rate [veh/h]	385	1540	417	1528	1810	1900	1499	1643	1900	1181
c, Capacity [veh/h]	167	995	176	463	621	1068	843	54	478	297
d1, Uniform Delay [s]	27.57	7.55	25.99	22.67	22.32	11.22	9.18	42.66	32.20	28.32
k, delay calibration	0.50	0.23	0.37	0.04	0.50	0.50	0.50	0.04	0.12	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	61.94	0.53	17.72	0.04	1.76	1.17	0.26	1.82	5.31	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

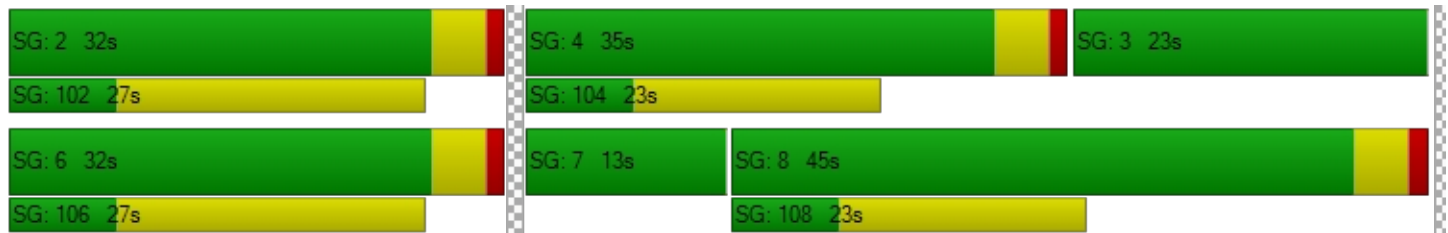
X, volume / capacity	0.97	0.39	0.73	0.12	0.38	0.41	0.11	0.41	0.86	0.44
d, Delay for Lane Group [s/veh]	89.51	8.08	43.71	22.71	24.09	12.39	9.44	44.48	37.51	28.70
Lane Group LOS	F	A	D	C	C	B	A	D	D	C
Critical Lane Group	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.49	3.39	2.85	0.81	3.98	4.95	0.83	0.50	9.06	2.34
50th-Percentile Queue Length [ft]	137.21	84.72	71.16	20.14	99.58	123.72	20.85	12.55	226.40	58.57
95th-Percentile Queue Length [veh]	9.33	6.10	5.12	1.45	7.17	8.60	1.50	0.90	13.99	4.22
95th-Percentile Queue Length [ft]	233.26	152.50	128.10	36.25	179.24	214.92	37.53	22.60	349.78	105.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	89.51	89.51	8.08	43.71	43.71	22.71	24.09	12.39	9.44	44.48	37.51	28.70
Movement LOS	F	F	A	D	D	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	31.94			37.51			15.65			35.75		
Approach LOS	C			D			B			D		
d_I, Intersection Delay [s/veh]	27.45											
Intersection LOS	C											
Intersection V/C	0.810											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	600	150	190	640	30	130	300	270	70	350	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	600	150	190	640	30	130	300	270	70	350	50
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	158	40	48	163	8	35	80	72	19	94	13
Total Analysis Volume [veh/h]	21	632	158	194	653	31	139	321	289	75	377	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	46	46	46	35	35	35	24	24	24
g / C, Green / Cycle	0.37	0.37	0.37	0.51	0.51	0.51	0.39	0.39	0.39	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.03	0.17	0.11	0.19	0.18	0.02	0.12	0.17	0.19	0.07	0.12	0.12
s, saturation flow rate [veh/h]	776	3618	1491	1026	3618	1484	1196	1900	1543	1057	1900	1796
c, Capacity [veh/h]	272	1353	558	536	1832	751	487	744	604	199	503	475
d1, Uniform Delay [s]	26.16	21.39	19.74	13.26	13.39	11.20	18.64	20.07	20.52	38.17	27.53	27.61
k, delay calibration	0.50	0.50	0.50	0.47	0.50	0.50	0.13	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	1.16	1.27	1.78	0.54	0.10	0.38	0.15	0.22	0.44	0.22	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

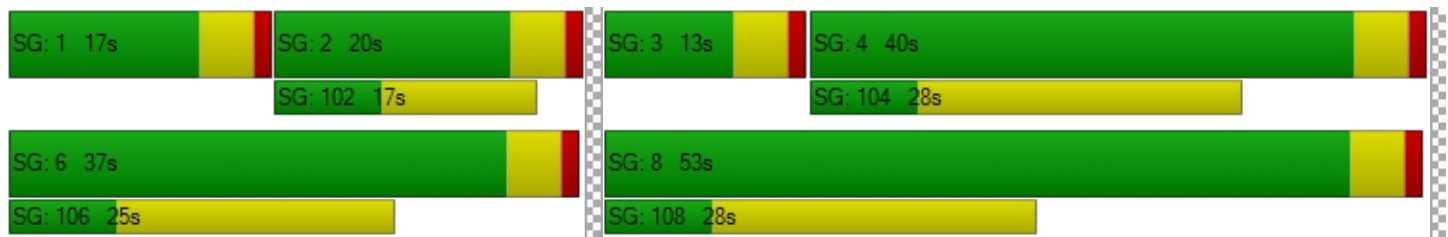
X, volume / capacity	0.08	0.47	0.28	0.36	0.36	0.04	0.29	0.43	0.48	0.38	0.44	0.45
d, Delay for Lane Group [s/veh]	26.71	22.55	21.01	15.04	13.93	11.31	19.01	20.22	20.74	38.60	27.75	27.85
Lane Group LOS	C	C	C	B	B	B	B	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.39	5.11	2.46	2.27	3.82	0.31	1.91	4.80	4.42	1.56	3.82	3.70
50th-Percentile Queue Length [ft]	9.64	127.79	61.39	56.79	95.43	7.85	47.70	119.88	110.59	39.11	95.39	92.53
95th-Percentile Queue Length [veh]	0.69	8.82	4.42	4.09	6.87	0.56	3.43	8.39	7.87	2.82	6.87	6.66
95th-Percentile Queue Length [ft]	17.35	220.49	110.49	102.23	171.78	14.12	85.87	209.67	196.82	70.40	171.71	166.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.71	22.55	21.01	15.04	13.93	11.31	19.01	20.22	20.74	38.60	27.79	27.85
Movement LOS	C	C	C	B	B	B	B	C	C	D	C	C
d_A, Approach Delay [s/veh]	22.36			14.08			20.20			29.40		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	20.55											
Intersection LOS	C											
Intersection V/C	0.427											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.313

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	70	60	30	90	30	80	700	70	10	700	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	70	60	30	90	30	80	700	70	10	700	10
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	21	18	10	29	10	21	183	18	3	187	3
Total Analysis Volume [veh/h]	12	83	71	38	114	38	83	730	73	11	749	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	52	52	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.65	0.58	0.58	0.65	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.05	0.05	0.03	0.09	0.09	0.21	0.22	0.01	0.20	0.20
s, saturation flow rate [veh/h]	1819	1486	1253	1707	882	1900	1784	773	1900	1884
c, Capacity [veh/h]	503	374	321	430	600	1093	1026	530	1000	991
d1, Uniform Delay [s]	26.52	26.46	30.24	27.66	6.72	10.35	10.44	6.44	12.64	12.65
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.09	0.06	0.18	0.04	0.98	1.09	0.07	1.10	1.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

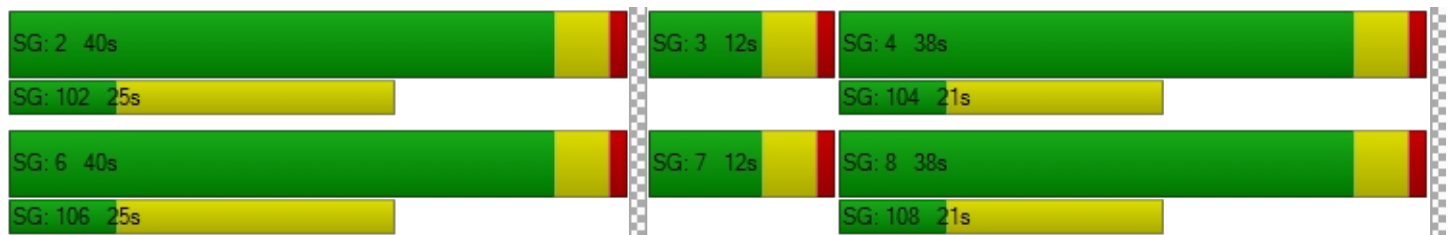
X, volume / capacity	0.19	0.19	0.12	0.35	0.14	0.37	0.39	0.02	0.38	0.38
d, Delay for Lane Group [s/veh]	26.59	26.55	30.30	27.84	6.76	11.32	11.53	6.52	13.74	13.77
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.57	1.17	0.67	2.62	0.53	4.31	4.23	0.08	4.57	4.56
50th-Percentile Queue Length [ft]	39.21	29.30	16.85	65.59	13.14	107.76	105.83	1.92	114.33	113.95
95th-Percentile Queue Length [veh]	2.82	2.11	1.21	4.72	0.95	7.72	7.61	0.14	8.08	8.06
95th-Percentile Queue Length [ft]	70.58	52.74	30.34	118.06	23.65	192.88	190.19	3.45	202.02	201.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.59	26.59	26.55	30.30	27.84	27.84	6.76	11.41	11.53	6.52	13.75	13.77
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.57			28.33			10.99			13.65		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.93											
Intersection LOS	B											
Intersection V/C	0.313											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	280	80	100	320	70	110	730	180	80	620	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	280	80	100	320	70	110	730	180	80	620	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	81	23	28	90	20	29	190	47	22	169	3
Total Analysis Volume [veh/h]	12	324	93	112	359	79	115	762	188	87	678	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.22	0.22	0.22	0.34	0.34	0.34	0.56	0.44	0.44	0.56	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.01	0.11	0.12	0.09	0.19	0.05	0.12	0.26	0.27	0.11	0.18	0.18
s, saturation flow rate [veh/h]	1008	1900	1663	1233	1900	1503	957	1900	1723	814	1900	1886
c, Capacity [veh/h]	122	411	360	434	648	513	556	828	751	447	822	816
d1, Uniform Delay [s]	41.90	31.19	31.52	21.45	24.11	20.64	10.32	19.35	19.55	11.63	17.75	17.75
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.38	0.52	0.12	0.28	0.05	0.25	3.12	3.68	0.97	1.58	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

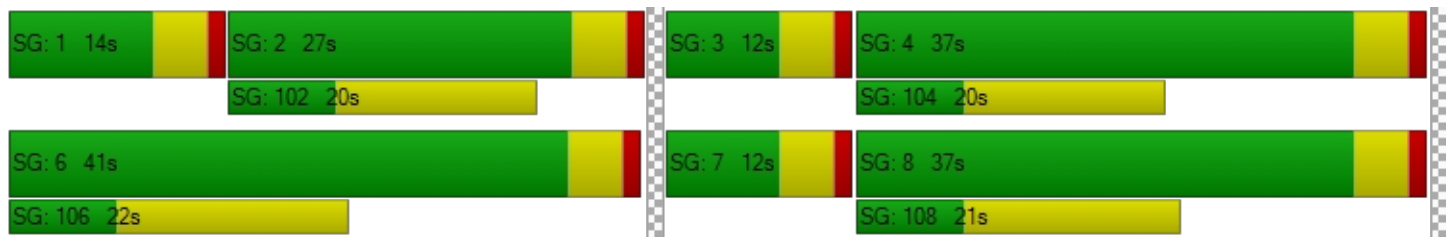
X, volume / capacity	0.10	0.52	0.56	0.26	0.55	0.15	0.21	0.59	0.61	0.19	0.42	0.42
d, Delay for Lane Group [s/veh]	42.03	31.57	32.03	21.56	24.39	20.69	10.56	22.47	23.23	12.59	19.33	19.35
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	4.07	3.91	1.64	6.06	1.14	1.05	8.16	7.79	0.87	5.14	5.12
50th-Percentile Queue Length [ft]	6.51	101.86	97.77	40.90	151.60	28.51	26.19	204.10	194.70	21.79	128.62	128.06
95th-Percentile Queue Length [veh]	0.47	7.33	7.04	2.95	10.10	2.05	1.89	12.85	12.36	1.57	8.86	8.83
95th-Percentile Queue Length [ft]	11.72	183.35	175.98	73.63	252.56	51.31	47.14	321.25	309.11	39.22	221.62	220.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.03	31.73	32.03	21.56	24.39	20.69	10.56	22.74	23.23	12.59	19.34	19.35
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.08			23.28			21.51			18.58		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.66											
Intersection LOS	C											
Intersection V/C	0.481											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	70	290	100	100	270	60	100	940	150	30	740	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	290	100	100	270	60	100	940	150	30	740	40
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	73	25	28	75	17	27	250	40	8	204	11
Total Analysis Volume [veh/h]	71	294	101	111	299	66	106	1000	160	33	815	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	7	34	34	7	46	46	35	35	35
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.52	0.52	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.07	0.15	0.07	0.06	0.16	0.04	0.06	0.31	0.32	0.07	0.23	0.23
s, saturation flow rate [veh/h]	1046	1900	1434	1810	1900	1486	1810	1900	1747	492	1900	1848
c, Capacity [veh/h]	199	480	362	142	725	567	137	981	902	145	740	720
d1, Uniform Delay [s]	37.96	29.78	27.08	40.78	20.44	18.02	40.89	15.33	15.62	36.32	21.76	21.82
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.48	0.15	3.57	0.14	0.03	3.51	2.76	3.32	3.61	3.38	3.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

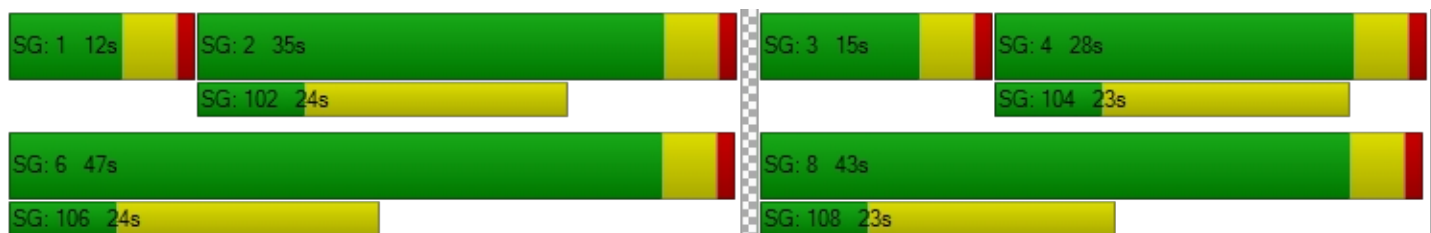
X, volume / capacity	0.36	0.61	0.28	0.78	0.41	0.12	0.77	0.60	0.63	0.23	0.59	0.59
d, Delay for Lane Group [s/veh]	38.36	30.26	27.24	44.35	20.58	18.05	44.40	18.09	18.94	39.93	25.13	25.37
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.47	5.48	1.71	2.50	4.41	0.86	2.41	8.71	8.58	0.81	7.65	7.56
50th-Percentile Queue Length [ft]	36.81	136.96	42.68	62.51	110.21	21.45	60.33	217.68	214.62	20.28	191.26	189.05
95th-Percentile Queue Length [veh]	2.65	9.32	3.07	4.50	7.85	1.54	4.34	13.55	13.39	1.46	12.19	12.07
95th-Percentile Queue Length [ft]	66.26	232.92	76.82	112.52	196.29	38.60	108.59	338.66	334.74	36.50	304.66	301.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.36	30.26	27.24	44.35	20.58	18.05	44.40	18.44	18.94	39.93	25.24	25.37
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	30.84			25.77			20.68			25.79		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.46											
Intersection LOS	C											
Intersection V/C	0.541											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.698

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			┌			┌┌┌			┌┌┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	90	100	66	90	30	10	1220	190	10	990	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	90	100	66	90	30	10	1220	190	10	990	10
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	29	32	18	31	10	3	327	51	3	261	3
Total Analysis Volume [veh/h]	7	116	129	70	124	41	11	1307	204	11	1046	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	49	49	2	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.54	0.54	0.02	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.28	0.01	0.40	0.42	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1693	600	1810	1900	1782	1810	1900	1889
c, Capacity [veh/h]	478	170	36	1034	970	36	1034	1028
d1, Uniform Delay [s]	27.08	31.94	43.49	15.69	16.03	43.49	12.96	12.97
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	45.20	1.77	4.82	5.77	1.77	1.81	1.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

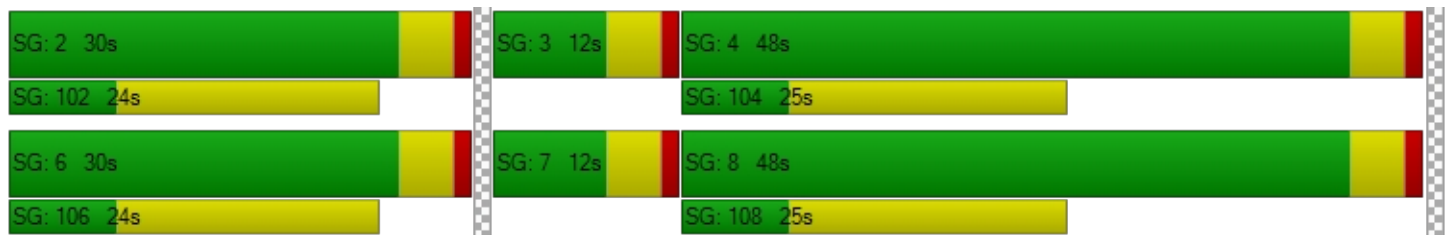
X, volume / capacity	0.51	0.97	0.31	0.74	0.77	0.31	0.51	0.51
d, Delay for Lane Group [s/veh]	27.39	77.14	45.26	20.51	21.80	45.26	14.77	14.80
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.35	5.55	0.26	12.32	12.38	0.26	6.75	6.74
50th-Percentile Queue Length [ft]	108.87	138.87	6.43	308.09	309.47	6.43	168.82	168.43
95th-Percentile Queue Length [veh]	7.78	9.42	0.46	18.08	18.15	0.46	11.01	10.99
95th-Percentile Queue Length [ft]	194.42	235.50	11.57	452.03	453.73	11.57	275.36	274.86

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.39	27.39	0.00	77.14	77.14	45.26	21.04	21.80	45.26	14.78	14.80
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	27.39			77.14			21.32			15.10		
Approach LOS	C			E			C			B		
d_I, Intersection Delay [s/veh]	22.67											
Intersection LOS	C											
Intersection V/C	0.698											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	72.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.851

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	640	270	750	220	680	0	0	1190	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	640	270	750	220	680	0	0	1190	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	163	69	191	57	177	0	0	307	10
Total Analysis Volume [veh/h]	0	0	0	653	275	765	228	706	0	0	1228	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	13	50	33	33
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.15	0.56	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.49	0.24	0.26	0.47	0.13	0.20	0.23	0.23
s, saturation flow rate [veh/h]	900	1856	1463	900	1810	3618	3618	1854
c, Capacity [veh/h]	304	627	494	304	264	2026	1312	673
d1, Uniform Delay [s]	29.80	26.00	26.76	29.80	37.53	10.82	23.85	23.67
k, delay calibration	0.50	0.19	0.24	0.50	0.08	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	222.2	2.60	5.75	189.5	5.97	0.47	2.45	4.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

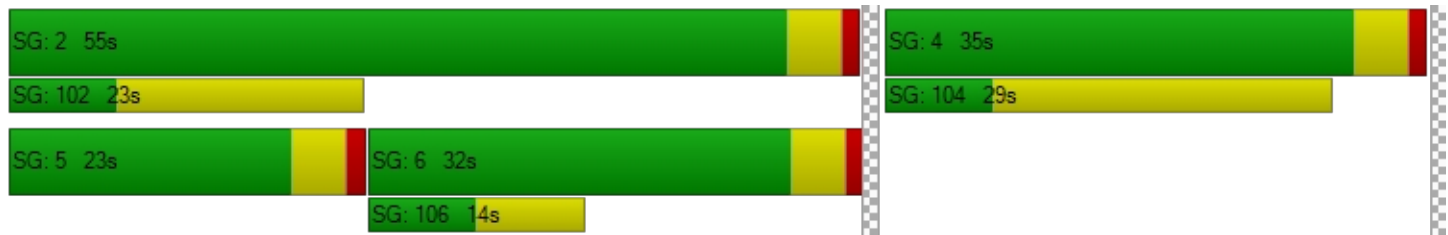
X, volume / capacity	1.46	0.71	0.78	1.38	0.86	0.35	0.64	0.63
d, Delay for Lane Group [s/veh]	252.0	28.60	32.51	219.3	43.50	11.30	26.30	28.09
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	24.73	8.11	7.55	21.97	5.25	3.69	7.65	7.97
50th-Percentile Queue Length [ft]	618.3	202.8	188.8	549.1	131.36	92.32	191.24	199.37
95th-Percentile Queue Length [veh]	39.87	12.79	12.06	35.16	9.01	6.65	12.19	12.61
95th-Percentile Queue Length [ft]	996.7	319.6	301.5	878.9	225.35	166.18	304.64	315.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	172.85	29.14	139.86	43.50	11.30	0.00	0.00	26.86	28.09
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			135.08			19.16			26.90		
Approach LOS	A			F			B			C		
d_I, Intersection Delay [s/veh]	72.05											
Intersection LOS	E											
Intersection V/C	0.851											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔						↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	170	380	250	0	0	0	0	740	680	810	1020	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	380	250	0	0	0	0	740	680	810	1020	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	122	80	0	0	0	0	201	184	218	274	0
Total Analysis Volume [veh/h]	218	487	320	0	0	0	0	802	737	870	1096	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21		26	26	26	29	60
g / C, Green / Cycle	0.23	0.23	0.23		0.29	0.29	0.29	0.32	0.67
(v / s)_j Volume / Saturation Flow Rate	0.20	0.20	0.20		0.21	0.26	0.26	0.25	0.30
s, saturation flow rate [veh/h]	1845	1729	1563		3618	1492	1492	3514	3618
c, Capacity [veh/h]	428	402	363		1051	434	434	1138	2408
d1, Uniform Delay [s]	33.08	33.08	33.39		28.79	30.54	30.54	27.36	7.22
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	1.97	2.82		0.37	2.49	2.49	4.90	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

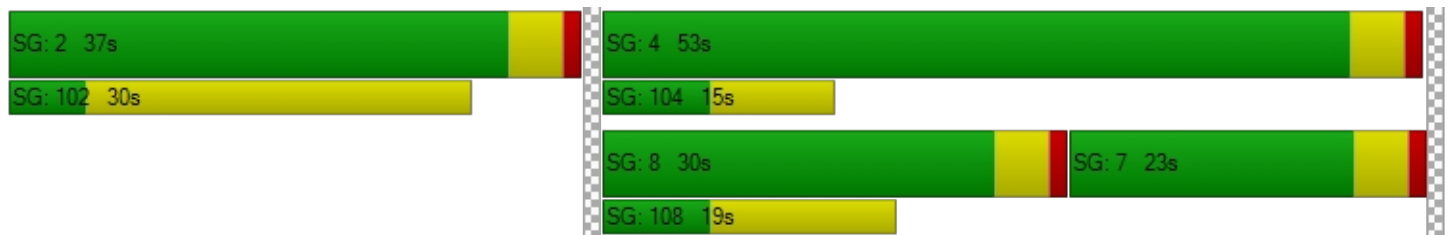
X, volume / capacity	0.85	0.85	0.88		0.73	0.89	0.89	0.76	0.46
d, Delay for Lane Group [s/veh]	34.93	35.05	36.20		29.16	33.03	33.03	32.26	7.85
Lane Group LOS	C	D	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.52	7.06	6.76		7.21	7.89	7.89	8.87	4.51
50th-Percentile Queue Length [ft]	188.01	176.53	169.07		180.21	197.22	197.22	221.87	112.74
95th-Percentile Queue Length [veh]	12.02	11.42	11.03		11.61	12.50	12.50	13.76	7.99
95th-Percentile Queue Length [ft]	300.44	285.48	275.69		290.29	312.38	312.38	344.02	199.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.93	35.01	36.20	0.00	0.00	0.00	0.00	29.16	33.03	32.26	7.85	0.00
Movement LOS	C	D	D					C	C	C	A	
d_A, Approach Delay [s/veh]	35.37			0.00				31.10		18.65		
Approach LOS	D			A				C		B		
d_I, Intersection Delay [s/veh]	26.66											
Intersection LOS	C											
Intersection V/C	0.710											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.772

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	150	470	120	180	360	70	120	1120	90	90	970	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	470	120	180	360	70	120	1120	90	90	970	70
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	120	31	52	105	20	34	313	25	26	283	20
Total Analysis Volume [veh/h]	153	479	122	209	418	81	134	1254	101	105	1134	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	33	33	14	35	35	11	49	49	5	44	44
g / C, Green / Cycle	0.10	0.27	0.27	0.12	0.29	0.29	0.09	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.08	0.25	0.08	0.12	0.13	0.14	0.07	0.35	0.06	0.06	0.31	0.05
s, saturation flow rate [veh/h]	1810	1900	1565	1810	1900	1775	1810	3618	1565	1810	3618	1571
c, Capacity [veh/h]	181	515	424	218	554	518	161	1488	644	82	1331	578
d1, Uniform Delay [s]	53.13	42.65	34.59	52.48	34.79	34.88	53.82	31.82	22.23	57.31	34.93	25.30
k, delay calibration	0.04	0.29	0.11	0.33	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	17.57	0.37	39.83	0.60	0.66	4.71	5.97	0.52	134.05	7.04	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

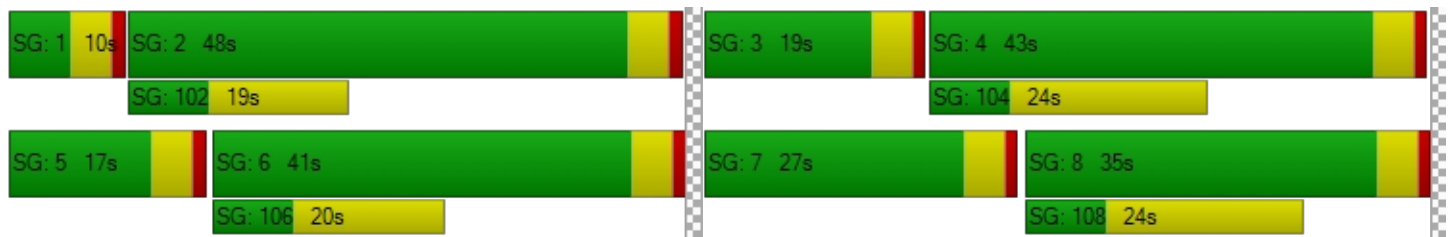
X, volume / capacity	0.85	0.93	0.29	0.96	0.46	0.47	0.83	0.84	0.16	1.28	0.85	0.14
d, Delay for Lane Group [s/veh]	57.28	60.22	34.96	92.31	35.40	35.54	58.53	37.79	22.75	191.35	41.98	25.82
Lane Group LOS	E	E	C	F	D	D	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.70	16.09	2.85	8.61	6.16	5.86	4.16	17.07	1.88	5.52	16.14	1.64
50th-Percentile Queue Length [ft]	117.62	402.23	71.21	215.17	154.01	146.58	103.93	426.86	46.88	137.94	403.38	40.91
95th-Percentile Queue Length [veh]	8.26	22.67	5.13	13.42	10.23	9.83	7.48	23.85	3.38	9.93	22.72	2.95
95th-Percentile Queue Length [ft]	206.55	566.69	128.17	335.46	255.77	245.86	187.07	596.28	84.38	248.30	568.08	73.64

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.28	60.22	34.96	92.31	35.45	35.54	58.53	37.79	22.75	191.35	41.98	25.82
Movement LOS	E	E	C	F	D	D	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.54			52.25			38.64			52.85		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	48.27											
Intersection LOS	D											
Intersection V/C	0.772											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	30	590	40	110	430	50	50	390	60	90	370	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	590	40	110	430	50	50	390	60	90	370	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	157	11	30	116	13	15	116	18	25	101	11
Total Analysis Volume [veh/h]	32	627	42	118	463	54	60	465	72	98	405	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	30	30	30	30	30
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.18	0.18	0.15	0.14	0.14	0.06	0.24	0.05	0.10	0.24
s, saturation flow rate [veh/h]	897	1900	1851	777	1900	1822	955	1900	1570	941	1861
c, Capacity [veh/h]	466	971	946	396	971	931	218	711	587	212	696
d1, Uniform Delay [s]	13.98	11.63	11.64	17.35	11.10	11.11	32.03	20.74	16.42	33.82	20.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	0.99	1.02	1.92	0.69	0.72	0.25	0.52	0.03	0.58	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

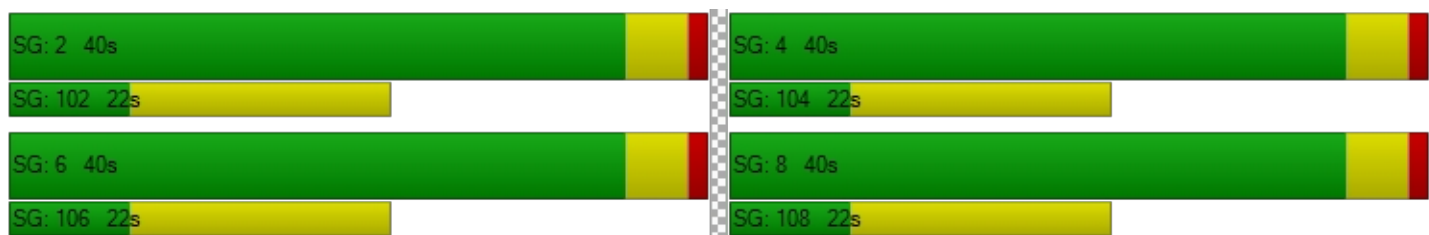
X, volume / capacity	0.07	0.35	0.35	0.30	0.27	0.27	0.28	0.65	0.12	0.46	0.64
d, Delay for Lane Group [s/veh]	14.27	12.62	12.67	19.28	11.78	11.84	32.28	21.26	16.46	34.40	21.09
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.37	3.56	3.50	1.69	2.62	2.55	1.05	6.74	0.82	1.81	6.46
50th-Percentile Queue Length [ft]	9.25	88.88	87.38	42.21	65.61	63.81	26.18	168.39	20.47	45.18	161.53
95th-Percentile Queue Length [veh]	0.67	6.40	6.29	3.04	4.72	4.59	1.88	10.99	1.47	3.25	10.63
95th-Percentile Queue Length [ft]	16.65	159.98	157.28	75.97	118.10	114.87	47.12	274.80	36.84	81.32	265.74

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.27	12.64	12.67	19.28	11.81	11.84	32.28	21.26	16.46	34.40	21.09	21.09
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	12.72			13.20			21.79			23.47		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.40											
Intersection LOS	B											
Intersection V/C	0.424											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	140	590	10	30	500	40	140	440	40	40	290	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	590	10	30	500	40	140	440	40	40	290	90
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	165	3	8	136	11	40	127	12	11	79	24
Total Analysis Volume [veh/h]	156	659	11	33	545	44	161	507	46	44	315	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	33	33	33	33	33
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.19	0.18	0.18	0.04	0.16	0.16	0.15	0.30	0.05	0.17	0.06
s, saturation flow rate [veh/h]	839	1900	1887	779	1900	1840	1079	1865	869	1900	1571
c, Capacity [veh/h]	435	1019	1012	400	1019	987	313	674	145	687	568
d1, Uniform Delay [s]	18.36	11.76	11.76	16.31	11.48	11.50	32.54	26.07	40.60	21.99	19.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.29	0.87	0.87	0.40	0.73	0.76	0.49	3.52	0.44	0.18	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.36	0.33	0.33	0.08	0.29	0.30	0.51	0.82	0.30	0.46	0.17
d, Delay for Lane Group [s/veh]	20.65	12.63	12.64	16.71	12.21	12.26	33.03	29.59	41.04	22.16	19.61
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.45	3.72	3.70	0.45	3.21	3.15	3.16	10.75	0.94	4.88	1.35
50th-Percentile Queue Length [ft]	61.14	92.89	92.43	11.15	80.25	78.74	79.02	268.64	23.62	121.97	33.74
95th-Percentile Queue Length [veh]	4.40	6.69	6.66	0.80	5.78	5.67	5.69	16.12	1.70	8.50	2.43
95th-Percentile Queue Length [ft]	110.06	167.20	166.38	20.06	144.45	141.72	142.24	403.04	42.52	212.53	60.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.65	12.63	12.64	16.71	12.23	12.26	33.03	29.59	29.59	41.04	22.16	19.61
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	14.15			12.47			30.37			23.43		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.79											
Intersection LOS	B											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	460	50	20	490	50	60	120	60	40	130	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	460	50	20	490	50	60	120	60	40	130	40
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	125	14	6	145	15	17	34	17	12	39	12
Total Analysis Volume [veh/h]	32	498	54	24	580	59	68	136	68	48	158	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.04	0.30	0.03	0.35	0.17	0.12	0.03
s, saturation flow rate [veh/h]	802	1842	870	1843	1628	1737	1523
c, Capacity [veh/h]	179	774	237	774	770	816	651
d1, Uniform Delay [s]	26.91	14.47	23.19	15.51	11.67	11.09	10.21
k, delay calibration	0.04	0.09	0.04	0.17	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	1.03	0.07	3.58	1.27	0.74	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

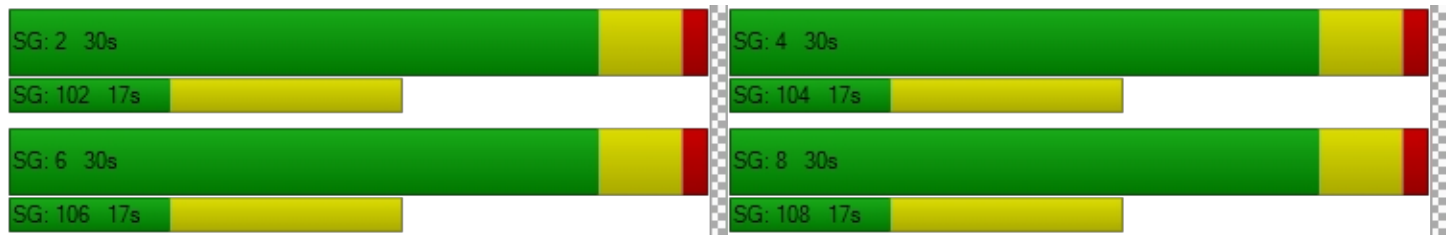
X, volume / capacity	0.18	0.71	0.10	0.83	0.35	0.25	0.07
d, Delay for Lane Group [s/veh]	27.09	15.50	23.26	19.09	12.94	11.84	10.43
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.58	0.29	7.42	2.42	1.71	0.37
50th-Percentile Queue Length [ft]	10.72	139.59	7.26	185.60	60.49	42.86	9.29
95th-Percentile Queue Length [veh]	0.77	9.46	0.52	11.89	4.36	3.09	0.67
95th-Percentile Queue Length [ft]	19.29	236.46	13.06	297.31	108.88	77.16	16.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.09	15.50	15.50	23.26	19.09	19.09	12.94	12.94	12.94	11.84	11.84	10.43
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.14			19.24			12.94			11.57		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.15											
Intersection LOS	B											
Intersection V/C	0.514											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	940	60	50	810	40	60	240	120	110	350	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	940	60	50	810	40	60	240	120	110	350	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	247	16	13	210	10	18	73	37	29	94	8
Total Analysis Volume [veh/h]	42	990	63	52	839	41	73	293	147	118	375	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	25	25	25	25	25	25
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.07	0.28	0.28	0.10	0.23	0.24	0.07	0.15	0.10	0.11	0.20	0.02
s, saturation flow rate [veh/h]	635	1900	1848	543	1900	1851	1013	1900	1532	1085	1900	1551
c, Capacity [veh/h]	354	1080	1051	296	1080	1052	210	601	485	266	601	491
d1, Uniform Delay [s]	14.65	10.34	10.37	17.03	9.71	9.74	33.48	22.09	20.67	31.49	23.28	19.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	1.61	1.67	1.29	1.16	1.21	0.37	0.23	0.13	0.43	0.40	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

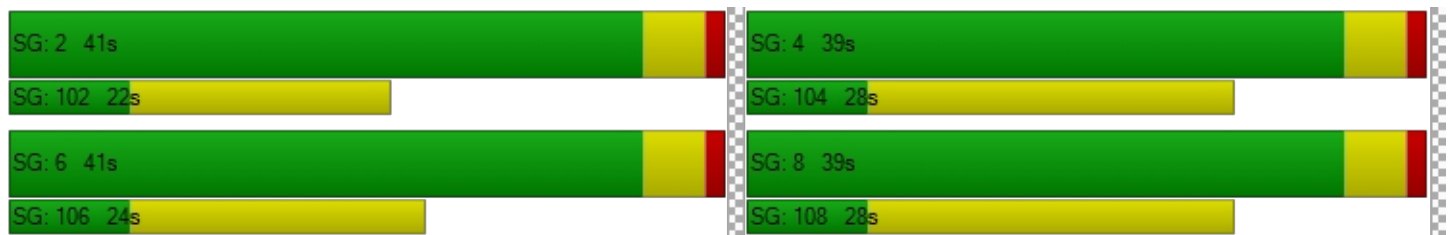
X, volume / capacity	0.12	0.49	0.50	0.18	0.41	0.41	0.35	0.49	0.30	0.44	0.62	0.07
d, Delay for Lane Group [s/veh]	15.33	11.94	12.04	18.32	10.87	10.95	33.85	22.32	20.80	31.92	23.68	19.10
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.51	5.26	5.18	0.72	4.09	4.04	1.34	4.30	2.02	2.15	5.93	0.41
50th-Percentile Queue Length [ft]	12.78	131.44	129.46	17.98	102.19	101.10	33.40	107.62	50.50	53.65	148.15	10.31
95th-Percentile Queue Length [veh]	0.92	9.02	8.91	1.29	7.36	7.28	2.40	7.71	3.64	3.86	9.92	0.74
95th-Percentile Queue Length [ft]	23.01	225.45	222.76	32.37	183.95	181.97	60.12	192.68	90.90	96.56	247.96	18.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.33	11.99	12.04	18.32	10.91	10.95	33.85	22.32	20.80	31.92	23.68	19.10
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	12.12			11.32			23.53			25.25		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.04											
Intersection LOS	B											
Intersection V/C	0.479											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.367

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			r/r			r/r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	100	80	40	70	60	40	320	50	40	410	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	100	80	40	70	60	40	320	50	40	410	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	28	23	10	18	15	11	88	14	11	113	6
Total Analysis Volume [veh/h]	11	114	91	41	72	62	44	352	55	44	453	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	55	55	55	55	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.13	0.08	0.04	0.05	0.19	0.04	0.04	0.24	0.01
s, saturation flow rate [veh/h]	1675	1330	1574	950	1900	1559	1041	1900	1546
c, Capacity [veh/h]	377	323	310	621	1307	1073	700	1307	1064
d1, Uniform Delay [s]	29.53	27.44	26.82	8.18	4.77	4.03	7.18	5.11	3.94
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.65	0.31	0.22	0.51	0.09	0.17	0.73	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

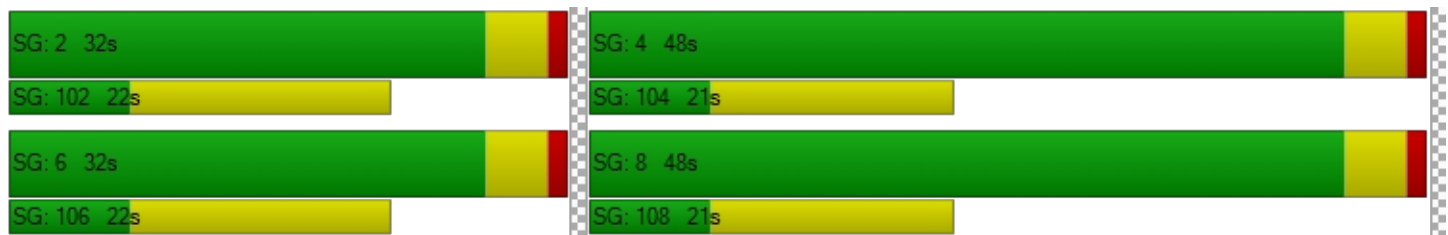
X, volume / capacity	0.57	0.35	0.20	0.07	0.27	0.05	0.06	0.35	0.02
d, Delay for Lane Group [s/veh]	30.91	28.08	27.13	8.40	5.28	4.12	7.35	5.83	3.98
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.79	1.83	0.98	0.36	1.93	0.26	0.32	2.67	0.10
50th-Percentile Queue Length [ft]	94.76	45.68	24.44	8.94	48.22	6.43	8.10	66.67	2.52
95th-Percentile Queue Length [veh]	6.82	3.29	1.76	0.64	3.47	0.46	0.58	4.80	0.18
95th-Percentile Queue Length [ft]	170.57	82.23	43.99	16.08	86.80	11.58	14.57	120.00	4.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.91	30.91	30.91	28.08	28.08	27.13	8.40	5.28	4.12	7.35	5.83	3.98
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.91			27.75			5.44			5.88		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.52											
Intersection LOS	B											
Intersection V/C	0.367											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	650	50	80	520	50	40	370	20	130	370	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	650	50	80	520	50	40	370	20	130	370	30
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	169	13	21	136	13	11	99	5	35	99	8
Total Analysis Volume [veh/h]	21	675	52	84	545	52	43	394	21	139	394	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.19	0.19	0.11	0.16	0.16	0.04	0.21	0.01	0.14	0.21	0.02
s, saturation flow rate [veh/h]	831	1900	1843	737	1900	1832	1003	1900	1571	1002	1900	1576
c, Capacity [veh/h]	436	1003	972	379	1003	967	250	679	561	250	679	563
d1, Uniform Delay [s]	14.00	11.06	11.08	16.67	10.61	10.63	29.52	20.83	16.74	32.80	20.83	16.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	1.04	1.08	1.35	0.77	0.81	0.12	0.35	0.01	0.72	0.35	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.37	0.37	0.22	0.30	0.30	0.17	0.58	0.04	0.56	0.58	0.06
d, Delay for Lane Group [s/veh]	14.21	12.10	12.16	18.01	11.38	11.44	29.64	21.19	16.75	33.53	21.19	16.87
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.24	3.77	3.70	1.15	2.96	2.89	0.72	5.72	0.24	2.59	5.72	0.37
50th-Percentile Queue Length [ft]	6.08	94.25	92.41	28.76	74.08	72.37	17.92	142.98	6.09	64.87	142.98	9.35
95th-Percentile Queue Length [veh]	0.44	6.79	6.65	2.07	5.33	5.21	1.29	9.64	0.44	4.67	9.64	0.67
95th-Percentile Queue Length [ft]	10.95	169.65	166.34	51.77	133.35	130.26	32.26	241.02	10.96	116.77	241.02	16.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.21	12.13	12.16	18.01	11.41	11.44	29.64	21.19	16.75	33.53	21.19	16.87
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.19			12.23			21.78			23.98		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.71											
Intersection LOS	B											
Intersection V/C	0.402											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	440	50	70	300	30	50	380	60	90	360	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	440	50	70	300	30	50	380	60	90	360	50
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	122	14	19	83	8	14	106	17	24	95	13
Total Analysis Volume [veh/h]	33	489	56	77	331	33	56	424	67	95	382	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	22	22	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.08	0.17	0.02	0.06	0.22	0.04	0.10	0.20	0.03
s, saturation flow rate [veh/h]	1062	1900	1556	921	1900	1556	1001	1900	1516	965	1900	1531
c, Capacity [veh/h]	517	1044	855	399	1044	855	260	606	484	233	606	489
d1, Uniform Delay [s]	13.45	9.56	7.36	17.56	8.60	7.25	26.31	20.86	16.95	29.03	20.28	16.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.51	0.15	1.08	0.80	0.08	0.15	0.55	0.05	0.43	0.40	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

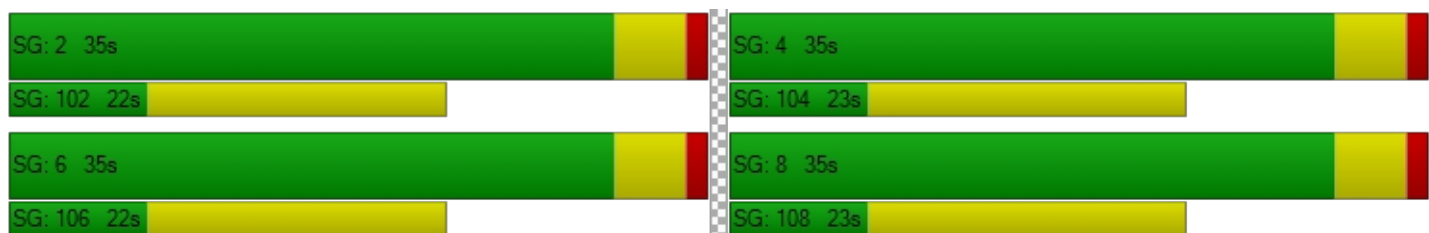
X, volume / capacity	0.06	0.47	0.07	0.19	0.32	0.04	0.22	0.70	0.14	0.41	0.63	0.11
d, Delay for Lane Group [s/veh]	13.69	11.07	7.51	18.63	9.40	7.34	26.46	21.41	17.00	29.46	20.69	16.82
Lane Group LOS	B	B	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.33	4.15	0.36	0.97	2.49	0.21	0.81	5.74	0.73	1.50	5.02	0.57
50th-Percentile Queue Length [ft]	8.30	103.86	9.07	24.13	62.35	5.26	20.29	143.51	18.29	37.39	125.39	14.32
95th-Percentile Queue Length [veh]	0.60	7.48	0.65	1.74	4.49	0.38	1.46	9.67	1.32	2.69	8.69	1.03
95th-Percentile Queue Length [ft]	14.94	186.95	16.33	43.43	112.23	9.47	36.51	241.74	32.93	67.29	217.21	25.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.69	11.07	7.51	18.63	9.40	7.34	26.46	21.41	17.00	29.46	20.69	16.82
Movement LOS	B	B	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	10.87			10.85			21.39			21.87		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.40											
Intersection LOS	B											
Intersection V/C	0.481											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	30	390	10	140	440	130	40	400	180	140	280	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	390	10	140	440	130	40	400	180	140	280	70
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	112	3	43	134	40	11	111	50	36	73	18
Total Analysis Volume [veh/h]	35	450	12	171	538	159	45	445	200	145	290	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	29	29	29	29	29	29
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.42	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.05	0.12	0.12	0.18	0.19	0.19	0.04	0.23	0.13	0.15	0.15	0.05
s, saturation flow rate [veh/h]	759	1900	1880	942	1900	1734	1096	1900	1566	954	1900	1568
c, Capacity [veh/h]	326	843	834	431	843	769	404	796	656	293	796	657
d1, Uniform Delay [s]	18.28	12.33	12.34	18.19	13.38	13.42	19.19	15.42	13.54	26.42	13.94	12.39
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.66	0.81	0.82	2.73	1.60	1.79	0.04	0.23	0.10	0.48	0.10	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

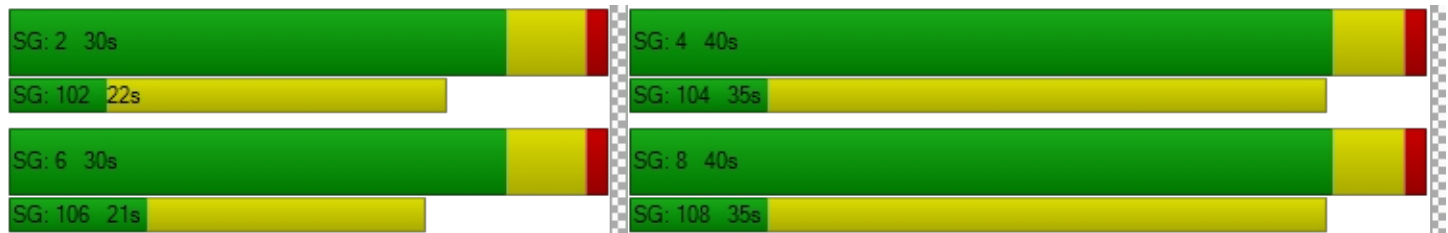
X, volume / capacity	0.11	0.27	0.28	0.40	0.43	0.43	0.11	0.56	0.30	0.49	0.36	0.11
d, Delay for Lane Group [s/veh]	18.94	13.14	13.16	20.91	14.98	15.21	19.23	15.65	13.63	26.90	14.04	12.41
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.51	2.64	2.62	2.23	3.62	3.39	0.53	4.94	1.95	2.21	2.90	0.65
50th-Percentile Queue Length [ft]	12.68	65.97	65.59	55.78	90.57	84.76	13.28	123.40	48.63	55.14	72.50	16.22
95th-Percentile Queue Length [veh]	0.91	4.75	4.72	4.02	6.52	6.10	0.96	8.58	3.50	3.97	5.22	1.17
95th-Percentile Queue Length [ft]	22.82	118.74	118.07	100.40	163.03	152.56	23.90	214.49	87.53	99.26	130.51	29.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.94	13.15	13.16	20.91	15.06	15.21	19.23	15.65	13.63	26.90	14.04	12.41
Movement LOS	B	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.56			16.24			15.30			17.48		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.71											
Intersection LOS	B											
Intersection V/C	0.427											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	520	60	50	450	20	60	60	40	20	100	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	520	60	50	450	20	60	60	40	20	100	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	154	18	14	130	6	16	16	11	6	30	6
Total Analysis Volume [veh/h]	12	618	71	58	519	23	65	65	43	24	120	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	7	7
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.01	0.37	0.08	0.27	0.02	0.11	0.09
s, saturation flow rate [veh/h]	884	1854	756	1900	1521	1642	1792
c, Capacity [veh/h]	446	927	329	950	760	515	523
d1, Uniform Delay [s]	9.24	6.60	13.03	5.70	4.21	11.09	11.03
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.45	0.09	0.18	0.01	0.14	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

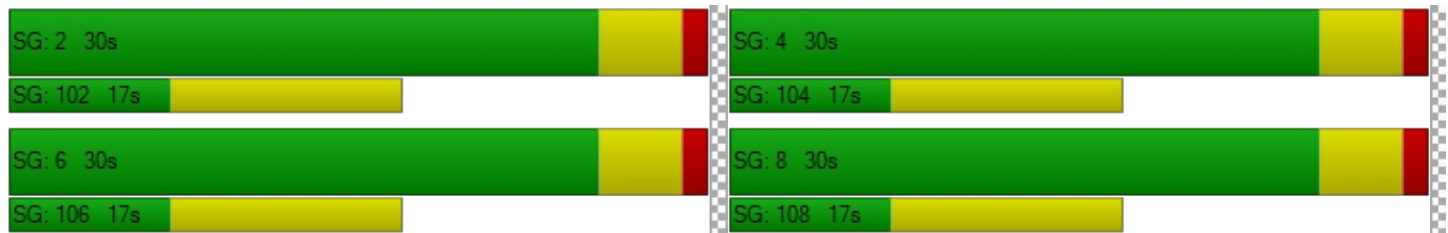
X, volume / capacity	0.03	0.74	0.18	0.55	0.03	0.34	0.32
d, Delay for Lane Group [s/veh]	9.25	7.05	13.12	5.88	4.21	11.23	11.16
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.05	1.98	0.32	1.26	0.04	0.80	0.77
50th-Percentile Queue Length [ft]	1.22	49.55	7.97	31.58	1.02	19.95	19.26
95th-Percentile Queue Length [veh]	0.09	3.57	0.57	2.27	0.07	1.44	1.39
95th-Percentile Queue Length [ft]	2.20	89.18	14.35	56.85	1.84	35.91	34.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.25	7.05	7.05	13.12	5.88	4.21	11.23	11.23	11.23	11.16	11.16	11.16
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.08			6.52			11.23			11.16		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.73											
Intersection LOS	A											
Intersection V/C	0.477											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	970	70	80	980	30	90	150	70	70	230	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	970	70	80	980	30	90	150	70	70	230	50
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	268	19	21	255	8	26	43	20	20	65	14
Total Analysis Volume [veh/h]	33	1070	77	83	1020	31	104	173	81	80	262	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.06	0.31	0.31	0.17	0.28	0.28	0.10	0.15	0.07	0.18
s, saturation flow rate [veh/h]	545	1900	1849	498	1900	1872	1058	1750	1106	1820
c, Capacity [veh/h]	293	1070	1042	264	1070	1055	247	563	287	586
d1, Uniform Delay [s]	16.72	10.98	11.00	20.29	10.56	10.58	32.13	21.52	29.14	22.30
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.78	1.97	2.04	3.09	1.63	1.67	0.42	0.21	0.20	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

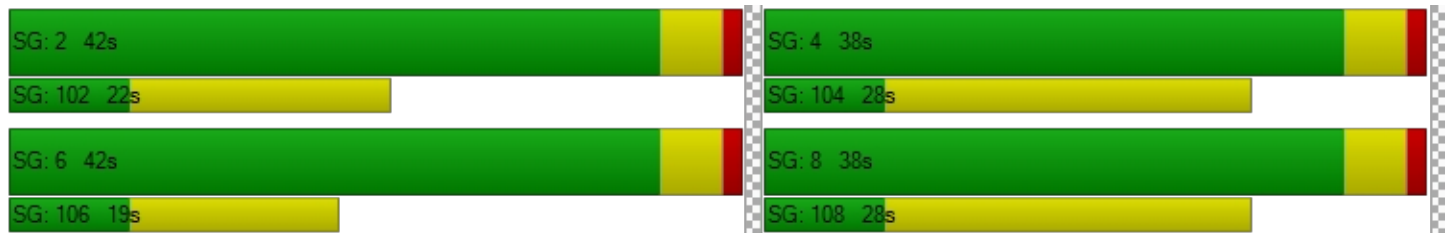
X, volume / capacity	0.11	0.54	0.54	0.31	0.49	0.50	0.42	0.45	0.28	0.54
d, Delay for Lane Group [s/veh]	17.50	12.95	13.04	23.38	12.19	12.25	32.56	21.73	29.33	22.60
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.44	6.11	6.00	1.40	5.65	5.62	1.85	3.58	1.32	4.66
50th-Percentile Queue Length [ft]	11.10	152.71	150.03	35.08	141.35	140.38	46.23	89.48	33.02	116.61
95th-Percentile Queue Length [veh]	0.80	10.16	10.02	2.53	9.55	9.50	3.33	6.44	2.38	8.21
95th-Percentile Queue Length [ft]	19.98	254.05	250.47	63.15	238.83	237.53	83.21	161.07	59.43	205.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.50	12.99	13.04	23.38	12.22	12.25	32.56	21.73	21.73	29.33	22.60	22.60
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.12			13.04			24.87			23.95		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.87											
Intersection LOS	B											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	51.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.024

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	150	80	50	120	40	80	330	20	60	330	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	150	80	50	120	40	80	330	20	60	330	30
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	52	28	13	31	10	21	86	5	16	86	8
Total Analysis Volume [veh/h]	28	208	111	52	125	42	83	344	21	62	342	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	50	50	50	50
g / C, Green / Cycle	0.26	0.26	0.26	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.22	0.17	0.03	0.80	0.01	0.66	0.02
s, saturation flow rate [veh/h]	1551	1072	1539	534	1558	609	1546
c, Capacity [veh/h]	444	332	392	390	982	436	974
d1, Uniform Delay [s]	28.49	24.70	22.81	17.87	5.55	17.90	5.58
k, delay calibration	0.18	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	1.33	0.12	73.52	0.04	28.34	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

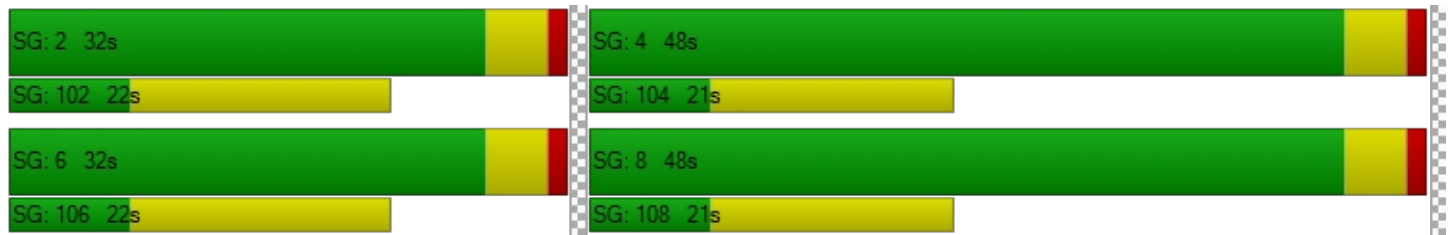
X, volume / capacity	0.78	0.53	0.11	1.09	0.02	0.93	0.03
d, Delay for Lane Group [s/veh]	33.54	26.04	22.93	91.39	5.59	46.24	5.64
Lane Group LOS	C	C	C	F	A	D	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	6.69	2.77	0.59	13.92	0.12	9.47	0.18
50th-Percentile Queue Length [ft]	167.30	69.23	14.81	347.91	3.00	236.77	4.47
95th-Percentile Queue Length [veh]	10.93	4.98	1.07	21.43	0.22	14.52	0.32
95th-Percentile Queue Length [ft]	273.37	124.61	26.66	535.66	5.40	362.94	8.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.54	33.54	33.54	26.04	26.04	22.93	91.39	91.39	5.59	46.24	46.24	5.64
Movement LOS	C	C	C	C	C	C	F	F	A	D	D	A
d_A, Approach Delay [s/veh]	33.54			25.44			87.36			43.35		
Approach LOS	C			C			F			D		
d_I, Intersection Delay [s/veh]	51.90											
Intersection LOS	D											
Intersection V/C	1.024											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	720	50	30	760	70	80	360	40	70	330	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	720	50	30	760	70	80	360	40	70	330	70
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	197	14	8	197	18	21	93	10	19	91	19
Total Analysis Volume [veh/h]	44	788	55	31	788	73	82	370	41	78	366	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.07	0.22	0.23	0.05	0.23	0.23	0.09	0.22	0.08	0.24
s, saturation flow rate [veh/h]	651	1900	1848	662	1900	1834	953	1862	988	1826
c, Capacity [veh/h]	334	1013	985	341	1013	978	196	655	224	642
d1, Uniform Delay [s]	16.76	11.24	11.25	16.17	11.32	11.34	34.58	21.55	32.42	22.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	1.29	1.33	0.53	1.34	1.40	0.53	0.72	0.34	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.42	0.42	0.09	0.43	0.43	0.42	0.63	0.35	0.69
d, Delay for Lane Group [s/veh]	17.58	12.52	12.59	16.70	12.66	12.74	35.11	22.27	32.76	23.79
Lane Group LOS	B	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.59	4.47	4.39	0.40	4.62	4.51	1.52	6.09	1.38	6.91
50th-Percentile Queue Length [ft]	14.87	111.83	109.74	10.11	115.54	112.69	38.06	152.22	34.61	172.80
95th-Percentile Queue Length [veh]	1.07	7.94	7.83	0.73	8.15	7.99	2.74	10.14	2.49	11.22
95th-Percentile Queue Length [ft]	26.76	198.55	195.64	18.20	203.68	199.74	68.51	253.40	62.30	280.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.58	12.55	12.59	16.70	12.69	12.74	35.11	22.27	22.27	32.76	23.79	23.79
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.80			12.84			24.41			25.13		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.16											
Intersection LOS	B											
Intersection V/C	0.474											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	40	550	10	20	380	40	70	290	20	110	210	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	550	10	20	380	40	70	290	20	110	210	70
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	151	3	6	114	12	18	75	5	28	53	18
Total Analysis Volume [veh/h]	44	606	11	24	458	48	73	302	21	111	212	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.05	0.32	0.01	0.03	0.24	0.03	0.07	0.17	0.11	0.16
s, saturation flow rate [veh/h]	940	1900	1552	825	1900	1542	1068	1866	1053	1749
c, Capacity [veh/h]	467	1049	857	368	1049	852	264	590	250	553
d1, Uniform Delay [s]	13.78	10.30	7.06	16.62	9.24	7.24	27.10	19.79	28.98	19.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	2.32	0.03	0.34	1.32	0.13	0.21	0.30	0.46	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.58	0.01	0.07	0.44	0.06	0.28	0.55	0.44	0.51
d, Delay for Lane Group [s/veh]	14.18	12.61	7.09	16.96	10.56	7.37	27.31	20.09	29.44	19.80
Lane Group LOS	B	B	A	B	B	A	C	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.46	5.67	0.07	0.28	3.78	0.31	1.06	4.02	1.72	3.47
50th-Percentile Queue Length [ft]	11.48	141.86	1.72	7.12	94.39	7.71	26.59	100.43	42.98	86.81
95th-Percentile Queue Length [veh]	0.83	9.58	0.12	0.51	6.80	0.55	1.91	7.23	3.09	6.25
95th-Percentile Queue Length [ft]	20.67	239.53	3.09	12.82	169.91	13.87	47.87	180.77	77.36	156.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.18	12.61	7.09	16.96	10.56	7.37	27.31	20.09	20.09	29.44	19.80	19.80
Movement LOS	B	B	A	B	B	A	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	12.63			10.56			21.42			22.51		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.80											
Intersection LOS	B											
Intersection V/C	0.492											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	560	150	110	440	120	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	560	150	110	440	120	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	166	45	31	124	37	24
Total Analysis Volume [veh/h]	665	178	124	494	146	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	6	6
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.35	0.11	0.16	0.26	0.08	0.06
s, saturation flow rate [veh/h]	1900	1555	776	1900	1810	1509
c, Capacity [veh/h]	1024	838	391	1024	338	282
d1, Uniform Delay [s]	5.48	4.02	11.93	4.81	12.07	11.85
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.05	0.17	0.13	0.33	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

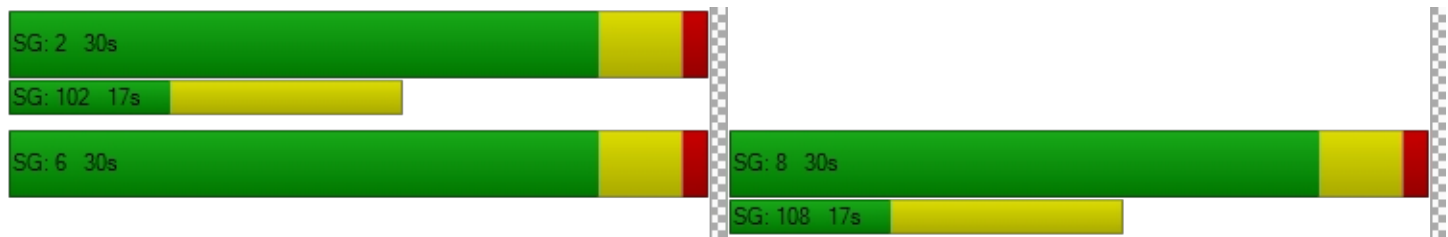
X, volume / capacity	0.65	0.21	0.32	0.48	0.43	0.34
d, Delay for Lane Group [s/veh]	5.74	4.07	12.11	4.95	12.39	12.12
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.52	0.29	0.66	0.98	0.81	0.53
50th-Percentile Queue Length [ft]	37.96	7.36	16.41	24.49	20.33	13.30
95th-Percentile Queue Length [veh]	2.73	0.53	1.18	1.76	1.46	0.96
95th-Percentile Queue Length [ft]	68.33	13.26	29.54	44.09	36.60	23.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.74	4.07	12.11	4.95	12.39	12.12
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.39		6.38		12.28	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.73					
Intersection LOS	A					
Intersection V/C	0.431					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	960	110	80	970	50	50	250	150	60	400	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	960	110	80	970	50	50	250	150	60	400	20
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	285	33	21	253	13	14	71	42	17	113	6
Total Analysis Volume [veh/h]	36	1140	131	84	1013	52	57	283	170	68	453	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.07	0.32	0.08	0.17	0.28	0.28	0.06	0.15	0.11	0.06	0.25
s, saturation flow rate [veh/h]	537	3618	1557	501	1900	1856	926	1900	1557	1100	1880
c, Capacity [veh/h]	270	1941	835	244	1019	996	178	662	543	313	655
d1, Uniform Delay [s]	18.93	12.54	9.38	23.06	11.98	12.01	34.93	19.94	19.05	27.09	22.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	1.31	0.40	3.83	1.95	2.02	1.03	0.44	0.33	0.34	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

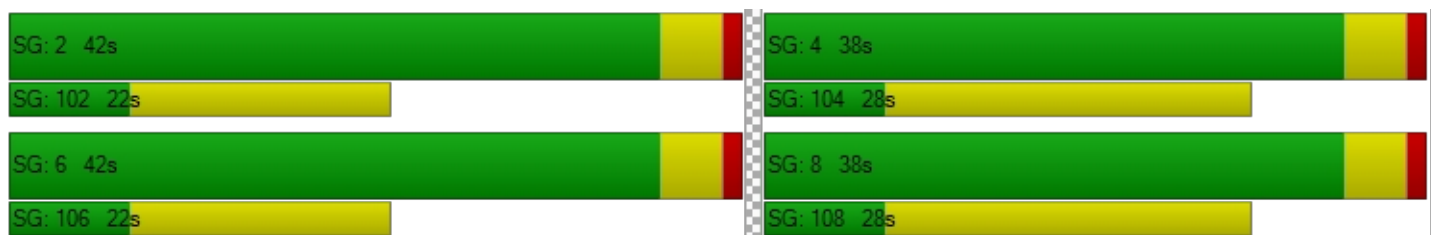
X, volume / capacity	0.13	0.59	0.16	0.34	0.53	0.53	0.32	0.43	0.31	0.22	0.73
d, Delay for Lane Group [s/veh]	19.95	13.86	9.78	26.89	13.92	14.03	35.97	20.38	19.38	27.44	24.97
Lane Group LOS	B	B	A	C	B	B	D	C	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	6.72	1.19	1.50	5.94	5.87	1.10	3.93	2.26	1.12	7.94
50th-Percentile Queue Length [ft]	13.60	167.93	29.67	37.49	148.39	146.71	27.43	98.31	56.49	28.02	198.42
95th-Percentile Queue Length [veh]	0.98	10.97	2.14	2.70	9.93	9.84	1.97	7.08	4.07	2.02	12.56
95th-Percentile Queue Length [ft]	24.48	274.19	53.40	67.47	248.28	246.03	49.37	176.96	101.69	50.43	313.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.95	13.86	9.78	26.89	13.97	14.03	35.97	20.38	19.38	27.44	24.97	24.97
Movement LOS	B	B	A	C	B	B	D	C	B	C	C	C
d_A, Approach Delay [s/veh]	13.61			14.92			21.79			25.28		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.04											
Intersection LOS	B											
Intersection V/C	0.568											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	250	40	100	140	20	70	510	100	30	720	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	250	40	100	140	20	70	510	100	30	720	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	72	12	31	43	6	19	137	27	8	193	5
Total Analysis Volume [veh/h]	12	289	46	123	172	25	75	549	108	32	771	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	44	44	44	44	44
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.55	0.55	0.55	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.01	0.18	0.21	0.29	0.04	0.11	0.18	0.18	0.04	0.42
s, saturation flow rate [veh/h]	1228	1836	600	600	600	696	1900	1763	786	1887
c, Capacity [veh/h]	131	614	182	201	201	238	1045	970	430	1038
d1, Uniform Delay [s]	37.71	21.64	22.25	24.80	18.46	27.78	9.83	9.88	13.43	13.94
k, delay calibration	0.11	0.11	0.14	0.31	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.76	5.72	24.43	0.28	3.44	0.82	0.91	0.34	5.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

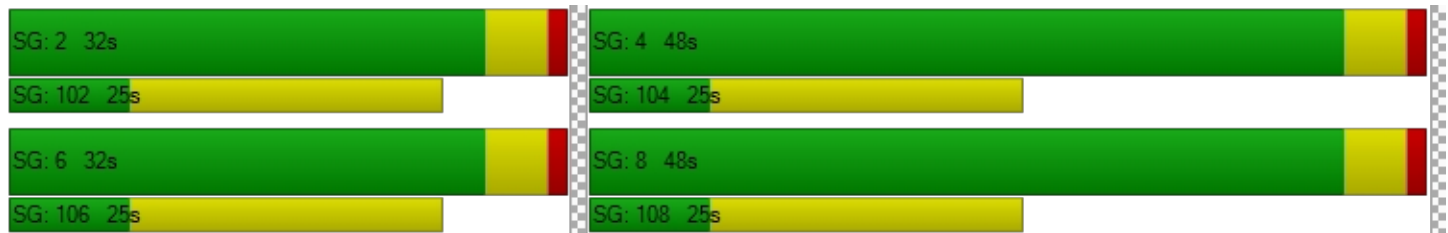
X, volume / capacity	0.09	0.55	0.68	0.86	0.12	0.32	0.32	0.33	0.07	0.76
d, Delay for Lane Group [s/veh]	38.00	22.39	27.97	49.23	18.73	31.22	10.65	10.79	13.77	19.25
Lane Group LOS	D	C	C	D	B	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	4.90	2.09	4.17	0.32	1.46	3.16	3.03	0.37	11.26
50th-Percentile Queue Length [ft]	5.83	122.58	52.29	104.30	7.98	36.41	79.01	75.63	9.13	281.39
95th-Percentile Queue Length [veh]	0.42	8.53	3.77	7.51	0.57	2.62	5.69	5.45	0.66	16.76
95th-Percentile Queue Length [ft]	10.49	213.37	94.13	187.74	14.37	65.54	142.23	136.13	16.43	418.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.00	22.39	22.39	27.97	49.23	18.73	31.22	10.70	10.79	13.77	19.25	19.25
Movement LOS	D	C	C	C	D	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	22.93			38.67			12.82			19.04		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	20.43											
Intersection LOS	C											
Intersection V/C	0.706											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	20	760	90	70	820	130	70	500	130	70	640	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	760	90	70	820	130	70	500	130	70	640	90
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	210	25	18	213	34	19	132	34	19	175	25
Total Analysis Volume [veh/h]	22	840	99	73	852	135	74	529	138	77	702	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	72	63	63	72	65	65	38	28	28	38	29	29
g / C, Green / Cycle	0.60	0.53	0.53	0.60	0.54	0.54	0.32	0.24	0.24	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.03	0.25	0.25	0.10	0.27	0.27	0.08	0.18	0.19	0.08	0.22	0.22
s, saturation flow rate [veh/h]	669	1900	1813	726	1900	1778	915	1900	1659	993	1900	1777
c, Capacity [veh/h]	391	1002	956	427	1033	966	233	450	393	264	452	423
d1, Uniform Delay [s]	11.48	17.90	17.96	11.70	17.02	17.13	32.11	42.68	43.35	31.28	44.35	44.65
k, delay calibration	0.50	0.50	0.50	0.21	0.50	0.50	0.09	0.08	0.11	0.04	0.17	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	1.63	1.74	0.36	1.66	1.84	0.62	2.06	4.52	0.23	10.32	13.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

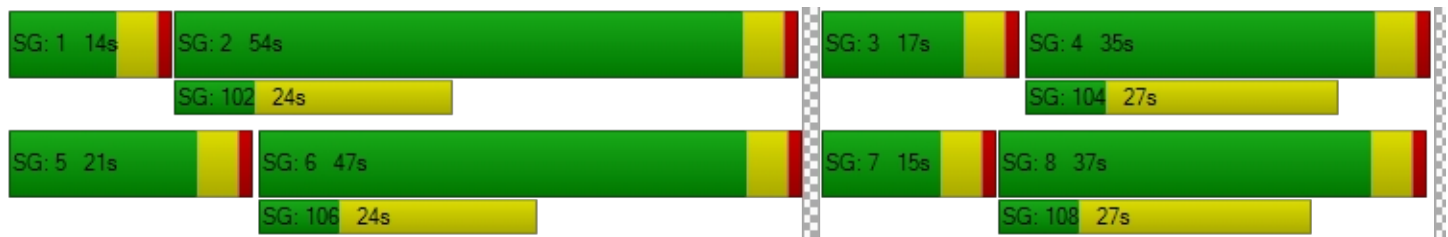
X, volume / capacity	0.06	0.48	0.48	0.17	0.49	0.50	0.32	0.77	0.82	0.29	0.90	0.93
d, Delay for Lane Group [s/veh]	11.76	19.53	19.70	12.07	18.67	18.97	32.74	44.74	47.87	31.51	54.67	58.51
Lane Group LOS	B	B	B	B	B	B	C	D	D	C	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.26	8.67	8.40	0.83	8.95	8.63	1.57	9.76	9.50	1.61	13.03	12.94
50th-Percentile Queue Length [ft]	6.48	216.70	210.03	20.66	223.74	215.66	39.22	244.00	237.52	40.24	325.66	323.45
95th-Percentile Queue Length [veh]	0.47	13.50	13.15	1.49	13.86	13.44	2.82	14.88	14.56	2.90	18.95	18.84
95th-Percentile Queue Length [ft]	11.66	337.41	328.87	37.20	346.40	336.09	70.59	372.08	363.90	72.44	473.64	470.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.76	19.60	19.70	12.07	18.79	18.97	32.74	45.83	47.87	31.51	56.27	58.51
Movement LOS	B	B	B	B	B	B	C	D	D	C	E	E
d_A, Approach Delay [s/veh]	19.43			18.35			44.90			54.35		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	32.73											
Intersection LOS	C											
Intersection V/C	0.527											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	50	510	150	30	320	100	90	440	300	70	620	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	510	150	30	320	100	90	440	300	70	620	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	139	41	8	82	26	24	120	82	19	168	14
Total Analysis Volume [veh/h]	55	556	164	31	329	103	98	478	326	76	673	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.05	0.29	0.10	0.04	0.17	0.07	0.13	0.23	0.24	0.11	0.19	0.20
s, saturation flow rate [veh/h]	1060	1900	1569	864	1900	1564	732	1900	1566	684	1900	1824
c, Capacity [veh/h]	492	943	779	332	943	776	238	707	583	200	707	679
d1, Uniform Delay [s]	14.80	12.55	9.91	19.59	10.74	9.50	26.84	17.84	18.11	29.00	17.11	17.17
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	2.70	0.62	0.56	1.02	0.35	0.42	0.32	0.56	0.44	0.22	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.59	0.21	0.09	0.35	0.13	0.41	0.61	0.64	0.38	0.52	0.53
d, Delay for Lane Group [s/veh]	15.26	15.25	10.53	20.15	11.76	9.86	27.26	18.15	18.67	29.44	17.33	17.41
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.60	5.95	1.35	0.41	2.92	0.81	1.50	5.26	4.67	1.21	4.31	4.22
50th-Percentile Queue Length [ft]	14.89	148.72	33.86	10.25	73.00	20.29	37.41	131.53	116.70	30.15	107.66	105.41
95th-Percentile Queue Length [veh]	1.07	9.95	2.44	0.74	5.26	1.46	2.69	9.02	8.21	2.17	7.71	7.58
95th-Percentile Queue Length [ft]	26.81	248.73	60.95	18.46	131.41	36.52	67.34	225.57	205.28	54.26	192.74	189.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.26	15.25	10.53	20.15	11.76	9.86	27.26	18.20	18.67	29.44	17.37	17.41
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.25			11.90			19.36			18.51		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.61											
Intersection LOS	B											
Intersection V/C	0.531											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.606

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	80	330	70	50	490	240	90	550	340	240	480	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	330	70	50	490	240	90	550	340	240	480	100
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	91	19	16	158	77	25	151	93	69	138	29
Total Analysis Volume [veh/h]	89	366	78	64	632	309	99	602	372	276	553	115
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.15	0.10	0.05	0.06	0.26	0.27	0.13	0.17	0.24	0.34	0.18	0.18
s, saturation flow rate [veh/h]	603	3618	1547	1017	1900	1637	777	3618	1554	823	1900	1764
c, Capacity [veh/h]	228	1570	672	451	825	711	322	1570	675	345	825	766
d1, Uniform Delay [s]	25.76	12.43	11.77	16.12	15.14	15.33	20.62	13.41	14.69	25.95	13.65	13.69
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.23	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.97	0.35	0.35	0.66	3.26	4.10	0.20	0.06	0.30	8.89	0.13	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.23	0.12	0.14	0.60	0.62	0.31	0.38	0.55	0.80	0.42	0.42
d, Delay for Lane Group [s/veh]	30.74	12.78	12.12	16.77	18.41	19.43	20.82	13.46	14.99	34.83	13.77	13.83
Lane Group LOS	C	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.64	1.77	0.75	0.76	6.21	5.73	1.27	2.94	4.02	5.35	3.43	3.24
50th-Percentile Queue Length [ft]	41.12	44.29	18.74	18.94	155.28	143.36	31.79	73.45	100.46	133.71	85.84	81.09
95th-Percentile Queue Length [veh]	2.96	3.19	1.35	1.36	10.30	9.66	2.29	5.29	7.23	9.14	6.18	5.84
95th-Percentile Queue Length [ft]	74.01	79.72	33.74	34.09	257.46	241.54	57.22	132.21	180.82	228.52	154.51	145.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.74	12.78	12.12	16.77	18.62	19.43	20.82	13.46	14.99	34.83	13.79	13.83
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	15.68			18.75			14.67			19.95		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.38											
Intersection LOS	B											
Intersection V/C	0.606											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.822

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	100	680	50	240	710	50	130	850	420	250	360	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	680	50	240	710	50	130	850	420	250	360	40
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	180	13	65	192	13	38	248	123	70	101	11
Total Analysis Volume [veh/h]	106	722	53	259	766	54	152	992	490	279	402	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	13	37	0	12	59	0	12	59	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	40	27	27	41	29	29	70	55	55	70	59	59
g / C, Green / Cycle	0.33	0.23	0.23	0.34	0.24	0.24	0.59	0.45	0.45	0.59	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.15	0.22	0.22	0.14	0.40	0.43	0.43	0.12	0.12
s, saturation flow rate [veh/h]	955	1900	1843	1763	1900	1843	1073	1900	1654	643	1900	1824
c, Capacity [veh/h]	266	429	416	597	455	442	651	864	752	314	930	893
d1, Uniform Delay [s]	31.42	45.40	45.48	30.82	44.42	44.51	11.64	29.90	31.58	37.06	17.77	17.79
k, delay calibration	0.04	0.26	0.26	0.08	0.27	0.27	0.47	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	16.35	17.73	0.36	15.55	16.96	0.79	12.85	23.45	28.91	0.62	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.92	0.92	0.43	0.91	0.92	0.23	0.89	0.95	0.89	0.24	0.25
d, Delay for Lane Group [s/veh]	31.77	61.75	63.22	31.18	59.97	61.47	12.43	42.76	55.03	65.97	18.40	18.45
Lane Group LOS	C	E	E	C	E	E	B	D	E	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.35	13.95	13.79	6.30	14.61	14.46	1.96	22.67	24.32	6.13	3.81	3.70
50th-Percentile Queue Length [ft]	58.81	348.70	344.67	157.43	365.25	361.58	48.95	566.67	607.91	153.27	95.23	92.38
95th-Percentile Queue Length [veh]	4.23	20.07	19.88	10.41	20.88	20.70	3.52	30.47	32.40	10.19	6.86	6.65
95th-Percentile Queue Length [ft]	105.85	501.83	496.90	260.32	521.97	517.50	88.11	761.87	810.09	254.79	171.41	166.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.77	62.42	63.22	31.18	60.66	61.47	12.43	45.57	55.03	65.97	18.42	18.45
Movement LOS	C	E	E	C	E	E	B	D	E	E	B	B
d_A, Approach Delay [s/veh]	58.78			53.62			45.33			36.70		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	48.69											
Intersection LOS	D											
Intersection V/C	0.822											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.520

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach						
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	730	130	0	820	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	730	130	0	820	300	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	196	35	0	231	95	0
Total Analysis Volume [veh/h]	785	140	0	926	378	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	56	56
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.26	0.26	0.26	0.10
s, saturation flow rate [veh/h]	1810	1746	3618	3618
c, Capacity [veh/h]	505	488	2236	2236
d1, Uniform Delay [s]	31.36	31.68	8.80	7.31
k, delay calibration	0.34	0.36	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.06	23.41	0.57	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

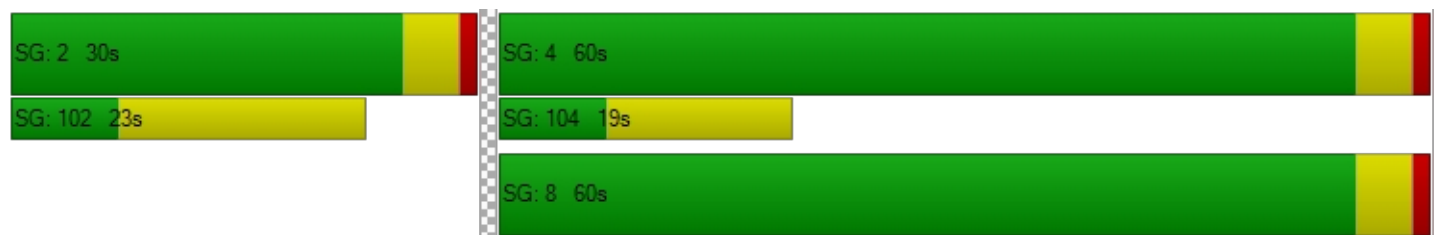
X, volume / capacity	0.92	0.95	0.41	0.17
d, Delay for Lane Group [s/veh]	49.42	55.09	9.36	7.47
Lane Group LOS	D	E	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	11.25	11.91	4.32	1.46
50th-Percentile Queue Length [ft]	281.27	297.80	108.06	36.43
95th-Percentile Queue Length [veh]	16.75	17.57	7.73	2.62
95th-Percentile Queue Length [ft]	418.79	439.31	193.31	65.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.74	55.09	0.00	9.36	7.47	0.00
Movement LOS	D	E		A	A	
d_A, Approach Delay [s/veh]	52.25		9.36		7.47	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	26.84					
Intersection LOS	C					
Intersection V/C	0.520					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	20	40	840	10	7	390	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	20	40	840	10	7	390	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	6	12	244	3	2	117	9
Total Analysis Volume [veh/h]	42	53	74	12	61	24	46	975	12	8	468	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	67	67	67	67	67
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.05	0.26	0.26	0.13	0.14
s, saturation flow rate [veh/h]	1639	1777	908	1900	1890	1900	1845
c, Capacity [veh/h]	309	325	690	1406	1399	1406	1365
d1, Uniform Delay [s]	35.35	33.70	5.11	4.11	4.11	3.51	3.52
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.19	0.19	0.69	0.70	0.28	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

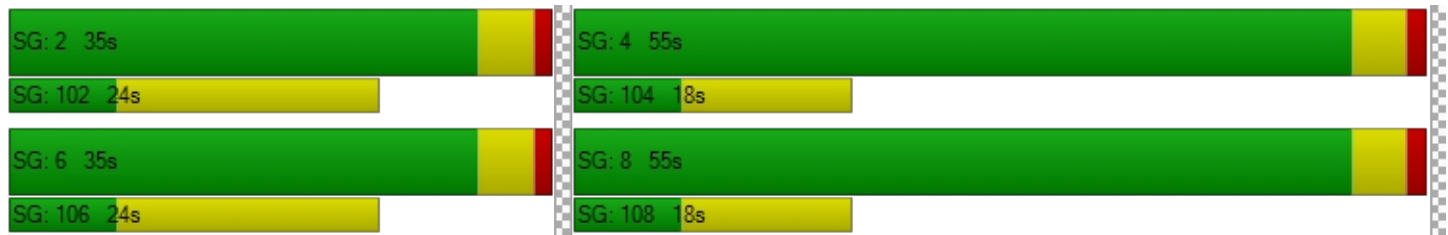
X, volume / capacity	0.55	0.30	0.07	0.35	0.35	0.18	0.18
d, Delay for Lane Group [s/veh]	35.92	33.89	5.30	4.80	4.81	3.79	3.82
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	1.86	0.29	2.69	2.68	1.16	1.17
50th-Percentile Queue Length [ft]	85.19	46.39	7.34	67.17	66.95	28.98	29.20
95th-Percentile Queue Length [veh]	6.13	3.34	0.53	4.84	4.82	2.09	2.10
95th-Percentile Queue Length [ft]	153.35	83.50	13.21	120.91	120.50	52.16	52.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.92	35.92	35.92	33.89	33.89	33.89	5.30	4.81	4.81	0.00	3.80	3.82
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.92			33.89			4.83			3.80		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.02											
Intersection LOS	A											
Intersection V/C	0.364											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.605

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	660	30	70	730	280	60	330	60	250	170	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	660	30	70	730	280	60	330	60	250	170	60
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	200	9	19	195	75	17	95	17	71	48	17
Total Analysis Volume [veh/h]	109	800	36	75	782	300	69	379	69	283	193	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	36	36	44	35	35	20	20	20	36	36	46
g / C, Green / Cycle	0.49	0.40	0.40	0.49	0.39	0.39	0.22	0.22	0.22	0.40	0.40	0.51
(v / s)_j Volume / Saturation Flow Rate	0.15	0.22	0.22	0.09	0.30	0.33	0.06	0.12	0.13	0.22	0.10	0.04
s, saturation flow rate [veh/h]	741	1900	1847	823	1900	1586	1160	1900	1745	1300	1900	1520
c, Capacity [veh/h]	326	766	744	408	739	617	231	419	385	539	771	774
d1, Uniform Delay [s]	17.44	20.64	20.72	13.70	23.99	24.94	36.23	31.15	31.33	19.70	17.72	11.37
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.74	2.83	3.00	0.08	7.48	12.70	0.27	0.41	0.50	0.30	0.06	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

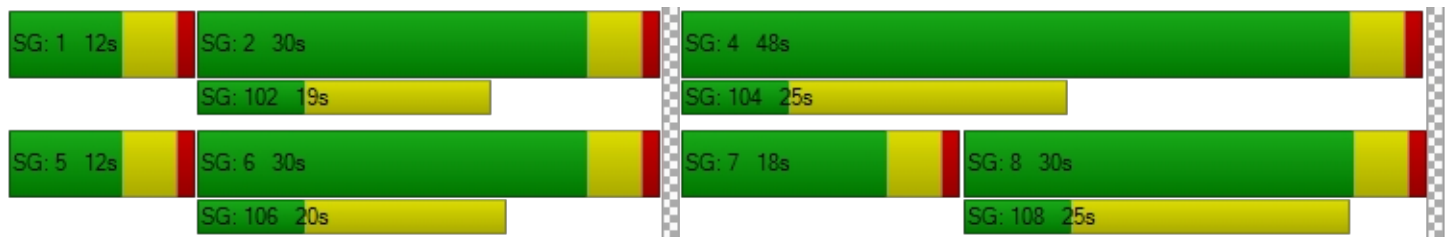
X, volume / capacity	0.33	0.55	0.56	0.18	0.77	0.84	0.30	0.55	0.57	0.53	0.25	0.09
d, Delay for Lane Group [s/veh]	20.18	23.47	23.72	13.78	31.47	37.65	36.50	31.56	31.83	20.00	17.79	11.39
Lane Group LOS	C	C	C	B	C	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.36	6.99	6.93	0.76	11.35	11.46	1.39	4.31	4.17	4.07	2.59	0.67
50th-Percentile Queue Length [ft]	33.97	174.74	173.37	18.96	283.72	286.51	34.63	107.82	104.13	101.78	64.80	16.86
95th-Percentile Queue Length [veh]	2.45	11.33	11.25	1.36	16.87	17.01	2.49	7.72	7.50	7.33	4.67	1.21
95th-Percentile Queue Length [ft]	61.15	283.13	281.35	34.12	421.83	425.31	62.34	192.97	187.43	183.20	116.64	30.36

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.18	23.59	23.72	13.78	33.17	37.65	36.50	31.67	31.83	20.00	17.79	11.39
Movement LOS	C	C	C	B	C	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	23.20			33.08			32.33			18.14		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	27.43											
Intersection LOS	C											
Intersection V/C	0.605											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	30	970	60	40	1130	20	70	60	40	40	160	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	970	60	40	1130	20	70	60	40	40	160	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	258	16	11	312	6	22	19	13	13	51	10
Total Analysis Volume [veh/h]	32	1031	64	44	1246	22	88	75	50	51	204	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	19	19
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.07	0.29	0.29	0.08	0.33	0.34	0.19	0.18
s, saturation flow rate [veh/h]	444	1900	1851	523	1900	1887	1096	1638
c, Capacity [veh/h]	291	1233	1201	343	1233	1224	322	440
d1, Uniform Delay [s]	12.84	6.96	6.97	11.58	7.41	7.42	28.48	28.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	1.18	1.23	0.77	1.54	1.56	0.87	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

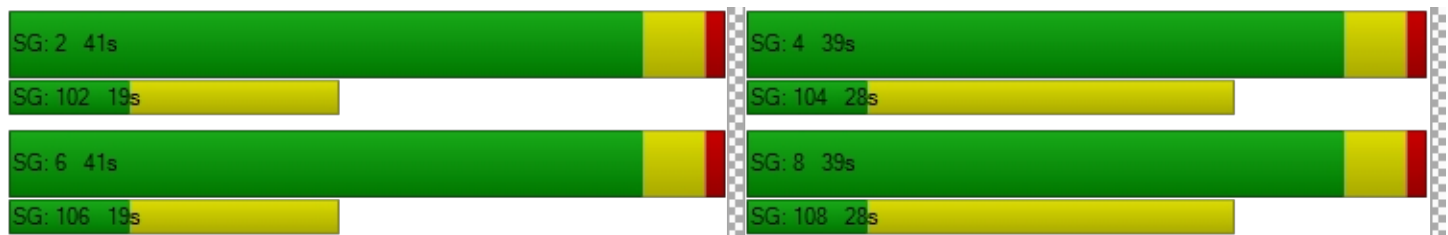
X, volume / capacity	0.11	0.45	0.45	0.13	0.52	0.52	0.66	0.67
d, Delay for Lane Group [s/veh]	13.60	8.14	8.20	12.35	8.96	8.98	29.35	28.67
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.37	4.08	4.02	0.47	5.03	5.01	3.77	4.98
50th-Percentile Queue Length [ft]	9.33	102.06	100.57	11.87	125.82	125.35	94.18	124.41
95th-Percentile Queue Length [veh]	0.67	7.35	7.24	0.85	8.71	8.69	6.78	8.63
95th-Percentile Queue Length [ft]	16.80	183.71	181.03	21.36	217.79	217.16	169.52	215.87

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.60	8.17	8.20	12.35	8.97	8.98	29.35	29.35	29.35	28.67	28.67	28.67
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.32			9.08			29.35			28.67		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.21											
Intersection LOS	B											
Intersection V/C	0.529											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	90	940	20	40	1260	80	210	10	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	90	940	20	40	1260	80	210	10	120
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	243	5	11	342	22	64	3	37
Total Analysis Volume [veh/h]	0	0	0	93	972	21	43	1368	87	257	12	147
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	90	90	90	90	90	90	20	20
g / C, Green / Cycle	0.75	0.75	0.75	0.75	0.75	0.75	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.25	0.26	0.26	0.07	0.39	0.39	0.15	0.09
s, saturation flow rate [veh/h]	371	1900	1881	576	1900	1855	1757	1555
c, Capacity [veh/h]	275	1434	1419	433	1434	1399	296	262
d1, Uniform Delay [s]	14.15	4.89	4.90	8.06	5.88	5.91	48.87	45.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.12	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	0.67	0.68	0.46	1.31	1.36	11.58	0.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.35	0.35	0.10	0.51	0.52	0.91	0.56
d, Delay for Lane Group [s/veh]	17.46	5.56	5.57	8.51	7.18	7.27	60.45	46.41
Lane Group LOS	B	A	A	A	A	A	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.63	3.85	3.83	0.48	7.12	7.07	8.75	4.04
50th-Percentile Queue Length [ft]	40.87	96.22	95.67	11.95	177.96	176.70	218.85	100.96
95th-Percentile Queue Length [veh]	2.94	6.93	6.89	0.86	11.49	11.43	13.61	7.27
95th-Percentile Queue Length [ft]	73.56	173.19	172.21	21.51	287.35	285.70	340.16	181.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	17.46	5.57	5.57	8.51	7.22	7.27	60.45	60.45	46.41
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			6.59			7.26			55.49		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	13.71											
Intersection LOS	B											
Intersection V/C	0.542											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	920	60	110	970	20	230	10	220	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	920	60	110	970	20	230	10	220	10	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	247	16	28	249	5	64	3	62	4	4	4
Total Analysis Volume [veh/h]	11	987	64	113	998	21	258	11	247	16	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	68	68	80	80	80	21	21	6
g / C, Green / Cycle	0.57	0.57	0.66	0.66	0.66	0.17	0.17	0.05
(v / s)_j Volume / Saturation Flow Rate	0.30	0.30	0.16	0.27	0.27	0.15	0.16	0.03
s, saturation flow rate [veh/h]	1866	1673	696	1900	1883	1813	1577	1767
c, Capacity [veh/h]	1091	951	447	1261	1250	316	275	83
d1, Uniform Delay [s]	15.82	16.01	10.02	9.27	9.28	48.01	48.48	56.01
k, delay calibration	0.50	0.50	0.36	0.50	0.50	0.04	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.71	2.12	0.97	0.97	0.98	2.53	6.47	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

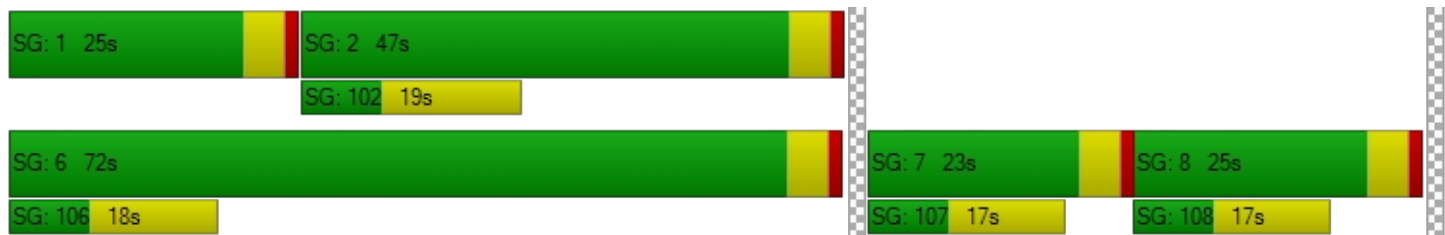
X, volume / capacity	0.51	0.53	0.25	0.41	0.41	0.85	0.90	0.58
d, Delay for Lane Group [s/veh]	17.52	18.13	10.99	10.24	10.26	50.54	54.95	58.39
Lane Group LOS	B	B	B	B	B	D	D	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.40	8.71	1.10	6.00	5.96	8.07	7.77	1.47
50th-Percentile Queue Length [ft]	235.04	217.78	27.40	149.96	149.08	201.81	194.32	36.72
95th-Percentile Queue Length [veh]	14.43	13.55	1.97	10.02	9.97	12.73	12.35	2.64
95th-Percentile Queue Length [ft]	360.75	338.79	49.32	250.38	249.19	318.30	308.63	66.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.52	17.80	18.13	10.99	10.25	10.26	50.54	50.54	54.95	58.39	58.39	58.39
Movement LOS	B	B	B	B	B	B	D	D	D	E	E	E
d_A, Approach Delay [s/veh]	17.81			10.32			52.65			58.39		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	21.96											
Intersection LOS	C											
Intersection V/C	0.512											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.759

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	580	50	120	660	10	160	430	200	0	180	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	580	50	120	660	10	160	430	200	0	180	30
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	150	13	33	180	3	42	113	53	0	48	8
Total Analysis Volume [veh/h]	0	601	52	131	720	11	168	452	210	0	192	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.35	0.14	0.39	0.14	0.37	0.00	0.10	0.02
s, saturation flow rate [veh/h]	1864	946	1894	1208	1787	785	1900	1560
c, Capacity [veh/h]	845	414	1061	369	603	80	641	526
d1, Uniform Delay [s]	20.68	14.17	14.16	30.23	29.80	0.00	21.97	20.16
k, delay calibration	0.50	0.23	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.78	0.93	3.66	0.33	66.26	0.00	0.10	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

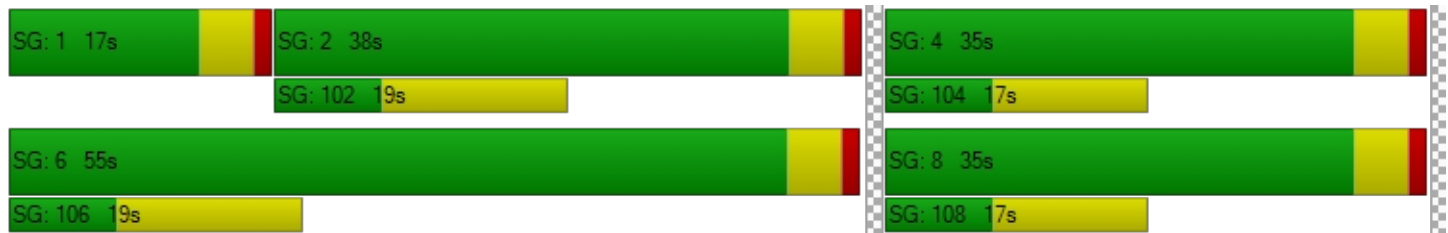
X, volume / capacity	0.77	0.32	0.69	0.46	1.10	0.00	0.30	0.06
d, Delay for Lane Group [s/veh]	27.45	15.10	17.82	30.56	96.06	0.00	22.06	20.18
Lane Group LOS	C	B	B	C	F	A	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	12.19	1.19	10.19	3.18	23.54	0.00	2.99	0.46
50th-Percentile Queue Length [ft]	304.70	29.70	254.83	79.49	588.54	0.00	74.64	11.42
95th-Percentile Queue Length [veh]	17.91	2.14	15.43	5.72	33.47	0.00	5.37	0.82
95th-Percentile Queue Length [ft]	447.84	53.46	385.73	143.08	836.83	0.00	134.35	20.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.45	27.45	15.10	17.82	17.82	30.56	96.06	96.06	0.00	22.06	20.18
Movement LOS		C	C	B	B	B	C	F	F	A	C	C
d_A, Approach Delay [s/veh]	27.45			17.41			82.80			21.79		
Approach LOS	C			B			F			C		
d_I, Intersection Delay [s/veh]	41.47											
Intersection LOS	D											
Intersection V/C	0.759											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	570	470	10	20	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	570	470	10	20	10
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	156	124	3	9	5
Total Analysis Volume [veh/h]	22	622	494	11	36	18
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	2
g / C, Green / Cycle	0.44	0.44	0.44	0.09
(v / s)_j Volume / Saturation Flow Rate	0.02	0.33	0.27	0.03
s, saturation flow rate [veh/h]	887	1900	1888	1740
c, Capacity [veh/h]	490	830	824	169
d1, Uniform Delay [s]	7.47	4.65	4.27	8.30
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.52	0.28	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

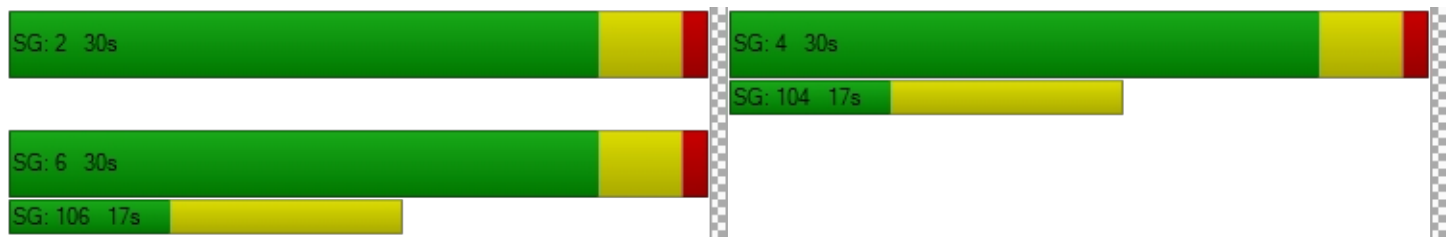
X, volume / capacity	0.04	0.75	0.61	0.32
d, Delay for Lane Group [s/veh]	7.49	5.17	4.55	8.70
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.50	0.35	0.12
50th-Percentile Queue Length [ft]	1.19	12.52	8.69	3.04
95th-Percentile Queue Length [veh]	0.09	0.90	0.63	0.22
95th-Percentile Queue Length [ft]	2.15	22.53	15.64	5.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.49	5.17	4.55	4.55	8.70	8.70
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.25		4.55		8.70	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.11					
Intersection LOS	A					
Intersection V/C	0.358					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	720	420	80	1030	490	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	720	420	80	1030	490	130
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	190	111	22	279	131	35
Total Analysis Volume [veh/h]	759	443	87	1117	523	139
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	79	79	7	90	20	20
g / C, Green / Cycle	0.65	0.65	0.06	0.75	0.17	0.17
(v / s)_j Volume / Saturation Flow Rate	0.32	0.37	0.05	0.31	0.15	0.10
s, saturation flow rate [veh/h]	1900	1646	1810	3618	3514	1463
c, Capacity [veh/h]	1244	1078	110	2729	594	247
d1, Uniform Delay [s]	10.44	11.24	55.53	5.24	48.63	45.74
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.34	2.08	4.68	0.46	1.74	0.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.48	0.56	0.79	0.41	0.88	0.56
d, Delay for Lane Group [s/veh]	11.78	13.32	60.21	5.69	50.37	46.49
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	8.24	8.99	2.74	4.46	7.76	3.86
50th-Percentile Queue Length [ft]	205.96	224.87	68.48	111.57	194.02	96.49
95th-Percentile Queue Length [veh]	12.95	13.91	4.93	7.93	12.33	6.95
95th-Percentile Queue Length [ft]	323.64	347.83	123.26	198.18	308.24	173.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.10	13.32	60.21	5.69	50.37	46.49
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	12.55		9.63		49.55	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	19.39					
Intersection LOS	B					
Intersection V/C	0.562					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.560

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	360	140	50	310	60	440	380	30	40	630	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	360	140	50	310	60	440	380	30	40	630	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	97	38	14	88	17	113	98	8	11	169	3
Total Analysis Volume [veh/h]	65	388	151	57	353	68	454	392	31	43	675	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.06	0.20	0.10	0.06	0.19	0.04	0.41	0.11	0.11	0.05	0.18	0.18
s, saturation flow rate [veh/h]	1034	1900	1522	995	1900	1555	1119	1900	1819	946	1900	1876
c, Capacity [veh/h]	392	834	668	365	834	682	506	817	782	247	488	482
d1, Uniform Delay [s]	19.42	13.90	12.28	20.20	13.59	11.57	19.81	12.85	12.88	26.39	23.68	23.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	1.86	0.79	0.91	1.58	0.29	17.48	0.06	0.07	0.12	0.70	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

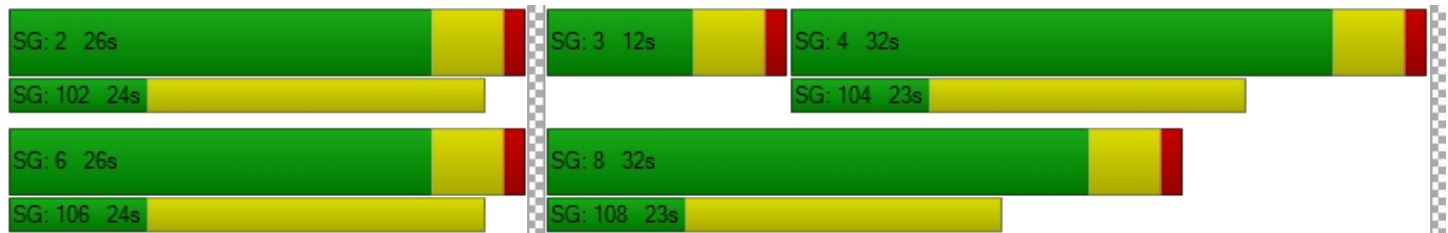
X, volume / capacity	0.17	0.47	0.23	0.16	0.42	0.10	0.90	0.26	0.27	0.17	0.70	0.71
d, Delay for Lane Group [s/veh]	20.33	15.77	13.07	21.11	15.16	11.86	37.29	12.92	12.95	26.51	24.38	24.45
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.85	4.24	1.45	0.77	3.75	0.61	7.45	2.00	1.96	0.62	4.97	4.95
50th-Percentile Queue Length [ft]	21.37	105.88	36.33	19.26	93.68	15.25	186.23	50.09	48.96	15.55	124.14	123.75
95th-Percentile Queue Length [veh]	1.54	7.61	2.62	1.39	6.74	1.10	11.93	3.61	3.53	1.12	8.62	8.60
95th-Percentile Queue Length [ft]	38.47	190.26	65.40	34.67	168.62	27.45	298.14	90.17	88.13	27.99	215.50	214.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.33	15.77	13.07	21.11	15.16	11.86	37.29	12.93	12.95	26.51	24.42	24.45
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.58			15.40			25.54			24.54		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.23											
Intersection LOS	C											
Intersection V/C	0.560											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	310	350	80	500	100	350	830	70	20	730	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	310	350	80	500	100	350	830	70	20	730	30
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	83	94	24	149	30	89	211	18	5	192	8
Total Analysis Volume [veh/h]	54	333	376	95	594	119	357	846	71	21	770	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	56	8	26	26	15	66	79	4	55	55
g / C, Green / Cycle	0.05	0.20	0.46	0.06	0.22	0.22	0.12	0.55	0.65	0.03	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.09	0.25	0.03	0.19	0.20	0.10	0.23	0.05	0.01	0.21	0.21
s, saturation flow rate [veh/h]	1810	3618	1499	2796	1900	1748	3514	3618	1558	1810	1900	1866
c, Capacity [veh/h]	88	728	695	191	412	379	427	1996	1020	53	873	858
d1, Uniform Delay [s]	55.96	42.17	23.04	56.43	45.60	45.89	51.55	15.74	7.51	57.18	22.24	22.27
k, delay calibration	0.04	0.04	0.23	0.04	0.06	0.07	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.17	1.38	0.75	3.84	6.17	1.70	0.66	0.01	1.75	1.76	1.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.46	0.54	0.50	0.89	0.91	0.84	0.42	0.07	0.39	0.46	0.46
d, Delay for Lane Group [s/veh]	58.50	42.34	24.42	57.18	49.44	52.06	53.25	16.40	7.52	58.93	24.00	24.07
Lane Group LOS	E	D	C	E	D	D	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.37	7.79	1.44	10.99	10.67	5.35	6.84	0.64	0.65	8.18	8.09
50th-Percentile Queue Length [ft]	41.67	109.32	194.75	35.99	274.71	266.87	133.65	171.10	16.11	16.30	204.59	202.27
95th-Percentile Queue Length [veh]	3.00	7.80	12.37	2.59	16.42	16.03	9.14	11.13	1.16	1.17	12.88	12.76
95th-Percentile Queue Length [ft]	75.00	195.05	309.19	64.78	410.62	400.82	228.45	278.36	29.01	29.34	321.88	318.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	42.34	24.42	57.18	50.45	52.06	53.25	16.40	7.52	58.93	24.03	24.07
Movement LOS	E	D	C	E	D	D	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	34.65			51.48			26.23			24.93		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	33.25											
Intersection LOS	C											
Intersection V/C	0.638											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	870	230	180	760	130	110	1230	10	100	900	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	870	230	180	760	130	110	1230	10	100	900	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	228	60	53	223	38	30	333	3	27	247	5
Total Analysis Volume [veh/h]	115	912	241	211	892	153	119	1332	11	110	987	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	34	34	9	34	34	6	52	52	6	52	52
g / C, Green / Cycle	0.08	0.29	0.29	0.08	0.29	0.29	0.05	0.44	0.44	0.05	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.16	0.06	0.25	0.10	0.03	0.24	0.24	0.03	0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	1509	3514	3618	1520	3514	3618	1889	3514	3618	1873
c, Capacity [veh/h]	141	1035	432	270	1032	434	176	1579	824	166	1569	812
d1, Uniform Delay [s]	54.46	40.87	36.37	54.36	40.66	34.06	56.00	25.18	25.20	56.17	23.56	23.58
k, delay calibration	0.04	0.15	0.21	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	3.72	2.24	1.88	3.26	0.70	1.69	1.43	2.73	1.68	0.07	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.88	0.56	0.78	0.86	0.35	0.68	0.56	0.56	0.66	0.42	0.42
d, Delay for Lane Group [s/veh]	58.86	44.59	38.61	56.24	43.92	34.76	57.69	26.62	27.93	57.85	23.62	24.24
Lane Group LOS	E	D	D	E	D	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	14.09	6.65	3.12	12.45	3.53	1.81	9.58	10.32	1.68	6.52	6.91
50th-Percentile Queue Length [ft]	93.91	352.34	166.15	78.08	311.24	88.19	45.34	239.54	258.11	41.94	162.89	172.80
95th-Percentile Queue Length [veh]	6.76	20.25	10.87	5.62	18.24	6.35	3.26	14.66	15.59	3.02	10.70	11.22
95th-Percentile Queue Length [ft]	169.04	506.26	271.85	140.54	455.91	158.74	81.61	366.45	389.85	75.50	267.55	280.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	44.59	38.61	56.24	43.92	34.76	57.69	27.06	27.93	57.85	23.83	24.24
Movement LOS	E	D	D	E	D	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	44.75			44.87			29.56			27.18		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	36.58											
Intersection LOS	D											
Intersection V/C	0.588											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	170	20	210	30	10	60	140	1560	70	70	1220	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	20	210	30	10	60	140	1560	70	70	1220	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	8	80	9	3	17	35	394	18	20	357	44
Total Analysis Volume [veh/h]	258	30	318	34	11	69	141	1574	71	82	1428	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	11	67	67	7	62	62
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.09	0.56	0.56	0.06	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.19	0.02	0.20	0.02	0.05	0.08	0.30	0.30	0.05	0.30	0.30
s, saturation flow rate [veh/h]	1327	1900	1610	1398	1595	1810	3618	1853	1810	3618	1791
c, Capacity [veh/h]	338	515	436	391	432	168	2013	1031	104	1885	933
d1, Uniform Delay [s]	46.46	32.36	39.69	35.78	33.53	53.50	16.86	16.89	55.78	19.54	19.57
k, delay calibration	0.14	0.04	0.15	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	0.02	3.31	0.09	0.20	4.26	1.04	2.05	4.93	1.25	2.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

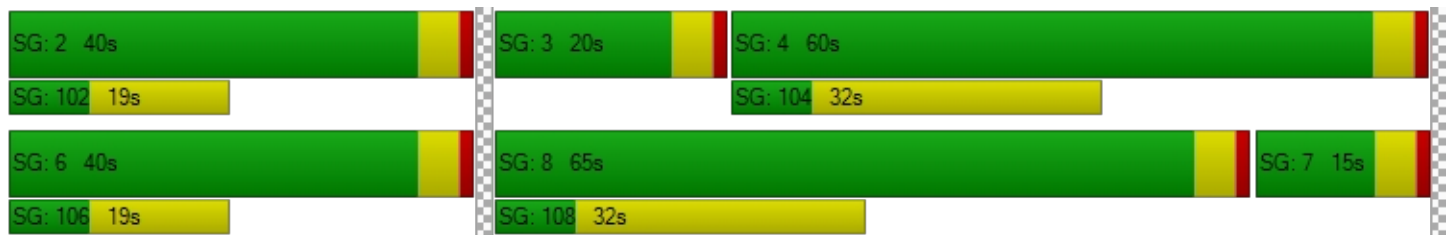
X, volume / capacity	0.76	0.06	0.73	0.09	0.19	0.84	0.54	0.54	0.79	0.57	0.57
d, Delay for Lane Group [s/veh]	51.18	32.37	43.00	35.88	33.73	57.77	17.91	18.94	60.70	20.79	22.10
Lane Group LOS	D	C	D	D	C	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.88	0.65	8.79	0.79	1.81	4.38	9.53	10.10	2.59	10.28	10.57
50th-Percentile Queue Length [ft]	196.94	16.19	219.77	19.69	45.19	109.48	238.23	252.56	64.79	257.09	264.17
95th-Percentile Queue Length [veh]	12.48	1.17	13.65	1.42	3.25	7.81	14.59	15.32	4.67	15.54	15.90
95th-Percentile Queue Length [ft]	312.02	29.15	341.33	35.45	81.34	195.28	364.79	382.88	116.63	388.57	397.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.18	32.37	43.00	35.88	33.73	33.73	57.77	18.23	18.94	60.70	21.12	22.10
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	45.95			34.37			21.38			23.15		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	25.99											
Intersection LOS	C											
Intersection V/C	0.573											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	420	1330	490	0	0	1470
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	420	1330	490	0	0	1470
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	110	348	132	0	0	406
Total Analysis Volume [veh/h]	439	1391	529	0	0	1625
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	90	20	75
g / C, Green / Cycle	0.29	0.75	0.17	0.63
(v / s)_i Volume / Saturation Flow Rate	0.12	0.77	0.15	0.24
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1357	613	4336
d1, Uniform Delay [s]	34.06	14.76	48.46	10.84
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	31.01	1.45	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.42	1.03	0.86	0.37
d, Delay for Lane Group [s/veh]	34.17	45.77	49.91	11.09
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.90	17.37	7.80	5.12
50th-Percentile Queue Length [ft]	122.48	434.36	195.11	128.10
95th-Percentile Queue Length [veh]	8.53	24.73	12.39	8.84
95th-Percentile Queue Length [ft]	213.24	618.33	309.65	220.91

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.17	45.77	49.91	0.00	0.00	11.09
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	42.99		49.91		11.09	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	30.89					
Intersection LOS	C					
Intersection V/C	0.460					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	490	310	1210	690	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	490	310	1210	690	0
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	136	86	321	183	0
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	543	344	1284	732	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			28	28	82	115	115
g / C, Green / Cycle			0.24	0.24	0.69	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.15	0.22	0.37	0.19	0.19
s, saturation flow rate [veh/h]			3618	1574	3514	1900	1900
c, Capacity [veh/h]			854	372	2415	1827	1827
d1, Uniform Delay [s]			41.17	44.77	9.24	0.11	0.11
k, delay calibration			0.04	0.21	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.29	17.16	0.84	0.25	0.25
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity			0.64	0.93	0.53	0.20	0.20
d, Delay for Lane Group [s/veh]			41.46	61.93	10.08	0.36	0.36
Lane Group LOS			D	E	B	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			7.24	11.70	7.92	0.13	0.13
50th-Percentile Queue Length [ft]			181.06	292.56	197.88	3.13	3.13
95th-Percentile Queue Length [veh]			11.66	17.31	12.53	0.23	0.23
95th-Percentile Queue Length [ft]			291.40	432.82	313.23	5.63	5.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.46	61.93	10.08	0.36	0.36
Movement LOS								D	E	B	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.40			6.55		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	19.64											
Intersection LOS	B											
Intersection V/C	0.584											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.386

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	└			+								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	20	740	28	40	670	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	20	740	28	40	670	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	5	203	8	13	211	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	22	811	30	50	846	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.24	0.24	0.27	0.27
s, saturation flow rate [veh/h]	1560	1380	1788	1729	1624	1729
c, Capacity [veh/h]	274	280	1368	1292	1247	1292
d1, Uniform Delay [s]	43.47	46.24	4.92	5.01	4.95	5.21
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.59	0.64	0.77	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

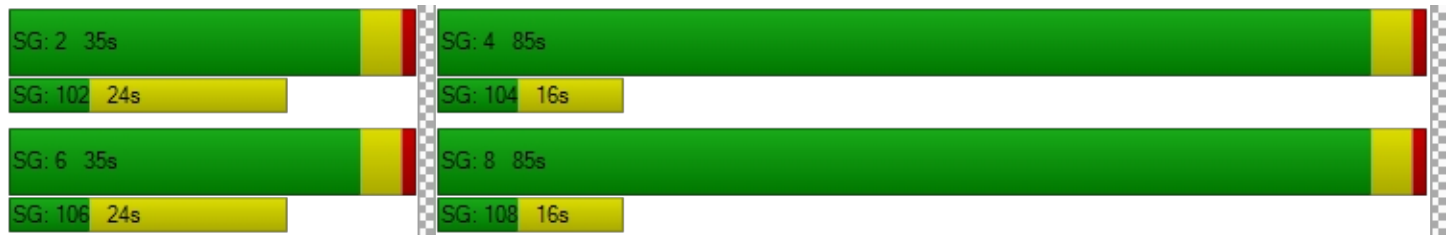
X, volume / capacity	0.36	0.59	0.31	0.32	0.35	0.36
d, Delay for Lane Group [s/veh]	43.77	46.97	5.51	5.65	5.72	5.99
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.24	3.20	3.38	3.76
50th-Percentile Queue Length [ft]	65.58	115.83	80.98	79.90	84.45	94.04
95th-Percentile Queue Length [veh]	4.72	8.16	5.83	5.75	6.08	6.77
95th-Percentile Queue Length [ft]	118.04	204.08	145.77	143.83	152.01	169.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.51	5.58	0.00	5.72	5.87	5.99
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		43.77		46.97			5.58			5.86		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	11.03											
Intersection LOS	B											
Intersection V/C	0.386											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	370	750	20	20	740	70	20	270	20	120	110	330
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	370	750	20	20	740	70	20	270	20	120	110	330
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	194	5	6	209	20	5	73	5	35	32	95
Total Analysis Volume [veh/h]	382	775	21	23	835	79	22	291	22	138	127	380
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	39	67	67	3	30	30	23	23	23	37	37	80
g / C, Green / Cycle	0.32	0.55	0.55	0.02	0.25	0.25	0.20	0.20	0.20	0.31	0.31	0.67
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.01	0.24	0.25	0.02	0.15	0.01	0.10	0.07	0.24
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1819	1263	1900	1478	1323	1900	1573
c, Capacity [veh/h]	1139	1053	1038	42	482	461	225	372	289	338	584	1054
d1, Uniform Delay [s]	30.74	15.08	15.10	57.96	44.21	44.40	46.11	45.79	39.36	32.54	30.81	8.62
k, delay calibration	0.50	0.50	0.50	0.04	0.40	0.41	0.04	0.08	0.04	0.04	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	1.04	1.07	4.16	28.57	32.38	0.07	2.80	0.04	0.29	0.07	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

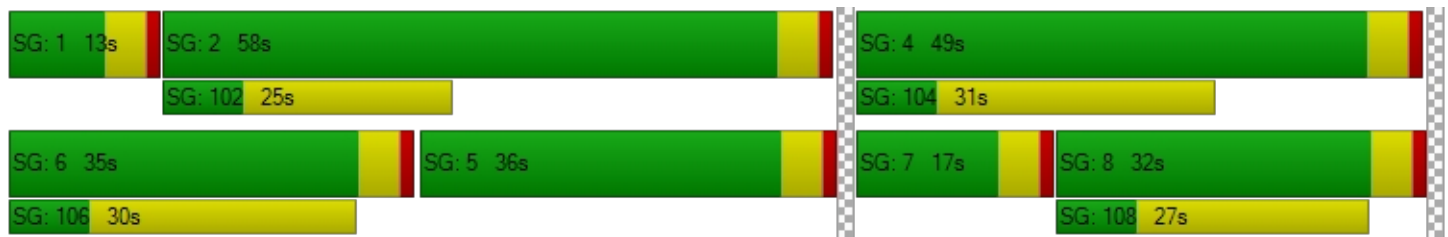
X, volume / capacity	0.34	0.38	0.38	0.55	0.96	0.98	0.10	0.78	0.08	0.41	0.22	0.36
d, Delay for Lane Group [s/veh]	31.53	16.12	16.17	62.12	72.78	76.78	46.18	48.59	39.41	32.84	30.88	8.90
Lane Group LOS	C	B	B	E	E	E	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.29	6.24	6.20	0.73	17.18	17.16	0.58	8.43	0.53	3.04	2.76	4.15
50th-Percentile Queue Length [ft]	107.13	156.00	154.97	18.36	429.58	429.07	14.58	210.73	13.31	76.11	68.98	103.71
95th-Percentile Queue Length [veh]	7.68	10.34	10.28	1.32	23.98	23.96	1.05	13.19	0.96	5.48	4.97	7.47
95th-Percentile Queue Length [ft]	192.01	258.41	257.05	33.05	599.53	598.92	26.25	329.77	23.95	136.99	124.17	186.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.53	16.14	16.17	62.12	74.56	76.78	46.18	48.59	39.41	32.84	30.88	8.90
Movement LOS	C	B	B	E	E	E	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.13			74.44			47.83			18.35		
Approach LOS	C			E			D			B		
d_I, Intersection Delay [s/veh]	39.58											
Intersection LOS	D											
Intersection V/C	0.624											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	160	650	710	50	80	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	650	710	50	80	50
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	170	184	13	22	14
Total Analysis Volume [veh/h]	167	680	737	52	90	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.72	0.72	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.20	0.36	0.39	0.03	0.05	0.04
s, saturation flow rate [veh/h]	843	1900	1900	1588	1810	1418
c, Capacity [veh/h]	671	1560	1358	1135	139	109
d1, Uniform Delay [s]	3.75	2.24	5.97	3.78	40.37	39.94
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	0.89	1.56	0.08	1.91	1.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

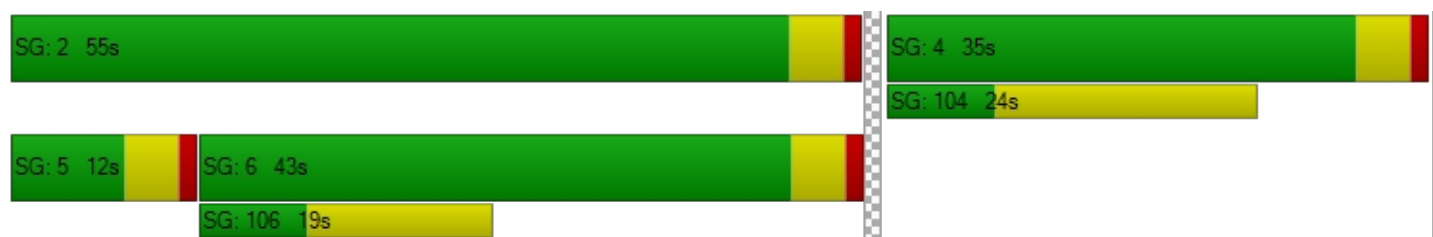
X, volume / capacity	0.25	0.44	0.54	0.05	0.65	0.52
d, Delay for Lane Group [s/veh]	4.63	3.13	7.53	3.86	42.28	41.35
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.37	1.57	5.13	0.23	1.97	1.21
50th-Percentile Queue Length [ft]	9.29	39.31	128.28	5.67	49.15	30.19
95th-Percentile Queue Length [veh]	0.67	2.83	8.85	0.41	3.54	2.17
95th-Percentile Queue Length [ft]	16.72	70.76	221.15	10.21	88.47	54.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.63	3.13	7.53	3.86	42.28	41.35
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.42		7.29		41.93	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.29					
Intersection LOS	A					
Intersection V/C	0.462					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	70	850	90	140	790	160	80	160	120	280	250	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	850	90	140	790	160	80	160	120	280	250	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	222	23	36	204	41	21	43	32	92	82	49
Total Analysis Volume [veh/h]	73	887	94	145	818	166	85	171	128	368	329	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	52	52	11	30	30	13	13	13	25	25	25
g / C, Green / Cycle	0.28	0.43	0.43	0.10	0.25	0.25	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.04	0.25	0.06	0.08	0.23	0.11	0.05	0.09	0.09	0.20	0.17	0.13
s, saturation flow rate [veh/h]	1810	3618	1547	1810	3618	1543	1810	1900	1441	1810	1900	1544
c, Capacity [veh/h]	507	1555	665	174	890	379	197	207	157	383	402	327
d1, Uniform Delay [s]	32.43	25.87	20.79	53.33	44.13	38.27	50.05	52.42	52.35	46.86	45.15	42.79
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.27	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	1.52	0.44	3.90	1.76	0.30	0.55	3.19	3.88	25.39	6.24	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

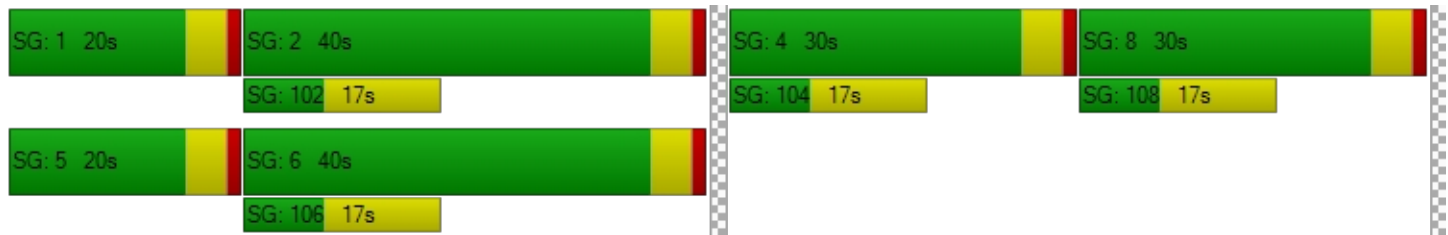
X, volume / capacity	0.14	0.57	0.14	0.83	0.92	0.44	0.43	0.83	0.82	0.96	0.82	0.60
d, Delay for Lane Group [s/veh]	33.03	27.39	21.23	57.23	45.89	38.56	50.61	55.61	56.23	72.25	51.39	43.46
Lane Group LOS	C	C	C	E	D	D	D	E	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.67	9.65	1.67	4.70	12.70	4.42	2.41	5.19	3.91	13.41	9.92	5.30
50th-Percentile Queue Length [ft]	41.79	241.37	41.76	117.50	317.48	110.61	60.13	129.67	97.74	335.27	248.05	132.39
95th-Percentile Queue Length [veh]	3.01	14.75	3.01	8.26	18.54	7.87	4.33	8.92	7.04	19.42	15.09	9.07
95th-Percentile Queue Length [ft]	75.23	368.76	75.18	206.39	463.59	196.85	108.23	223.04	175.93	485.42	377.19	226.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.03	27.39	21.23	57.23	45.89	38.56	50.61	55.61	56.23	72.25	51.39	43.46
Movement LOS	C	C	C	E	D	D	D	E	E	E	D	D
d_A, Approach Delay [s/veh]	27.23			46.27			54.71			58.23		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	44.50											
Intersection LOS	D											
Intersection V/C	0.619											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	70	440	90	50	340	50	70	400	40	100	440	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	440	90	50	340	50	70	400	40	100	440	60
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	115	24	14	93	14	21	117	12	27	120	16
Total Analysis Volume [veh/h]	73	461	94	55	374	55	82	469	47	109	479	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.08	0.31	0.06	0.23	0.09	0.25	0.03	0.12	0.25	0.04
s, saturation flow rate [veh/h]	972	1816	866	1856	929	1900	1560	937	1900	1563
c, Capacity [veh/h]	381	837	288	855	253	733	602	260	733	603
d1, Uniform Delay [s]	17.37	12.57	20.84	11.35	24.17	15.03	11.67	24.60	15.13	11.81
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	4.12	1.47	2.10	0.27	0.35	0.02	0.40	0.37	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

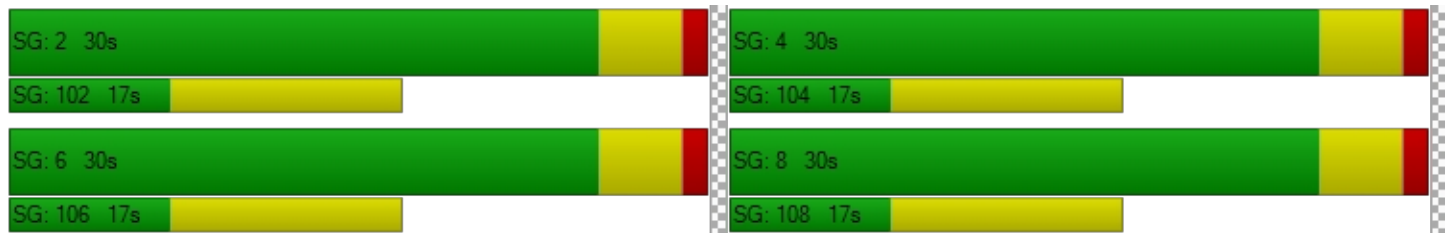
X, volume / capacity	0.19	0.66	0.19	0.50	0.32	0.64	0.08	0.42	0.65	0.11
d, Delay for Lane Group [s/veh]	18.48	16.69	22.31	13.45	24.45	15.38	11.69	25.01	15.50	11.84
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.87	6.03	0.74	3.91	1.02	4.50	0.35	1.39	4.63	0.49
50th-Percentile Queue Length [ft]	21.80	150.77	18.47	97.85	25.58	112.48	8.70	34.84	115.75	12.18
95th-Percentile Queue Length [veh]	1.57	10.06	1.33	7.05	1.84	7.98	0.63	2.51	8.16	0.88
95th-Percentile Queue Length [ft]	39.25	251.45	33.25	176.14	46.04	199.45	15.66	62.72	203.97	21.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.48	16.69	16.69	22.31	13.45	13.45	24.45	15.38	11.69	25.01	15.50	11.84
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	16.90			14.46			16.33			16.72		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.21											
Intersection LOS	B											
Intersection V/C	0.558											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	930	60	130	1100	80	90	400	40	140	480	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	930	60	130	1100	80	90	400	40	140	480	80
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	259	17	34	289	21	25	112	11	40	138	23
Total Analysis Volume [veh/h]	67	1036	67	137	1157	84	101	449	45	162	554	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	63	51	51	63	52	52	48	35	35	48	37	37
g / C, Green / Cycle	0.52	0.43	0.43	0.52	0.43	0.43	0.40	0.29	0.29	0.40	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.10	0.29	0.30	0.19	0.33	0.34	0.10	0.24	0.03	0.14	0.29	0.06
s, saturation flow rate [veh/h]	648	1900	1847	717	1900	1833	1052	1900	1537	1162	1900	1562
c, Capacity [veh/h]	296	807	785	337	818	789	264	547	443	346	582	479
d1, Uniform Delay [s]	20.22	28.06	28.15	19.74	29.01	29.25	28.31	39.79	31.31	27.09	40.70	30.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.18	0.18	0.04	0.04	0.29	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.77	4.80	5.05	3.61	6.77	7.47	1.53	5.13	0.04	0.37	18.68	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

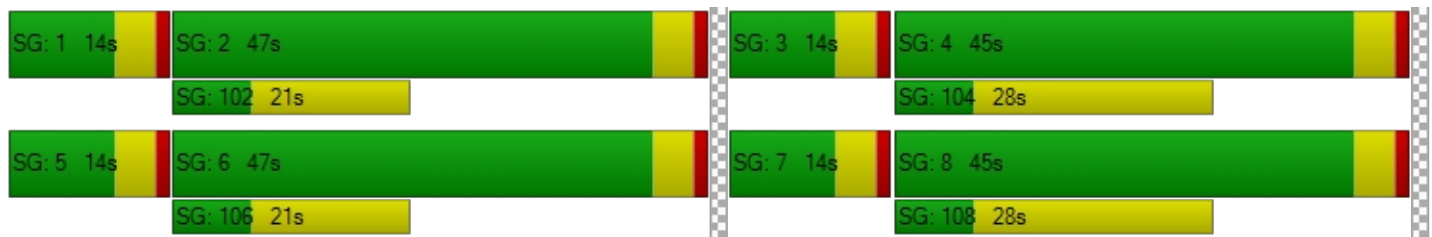
X, volume / capacity	0.23	0.69	0.70	0.41	0.77	0.78	0.38	0.82	0.10	0.47	0.95	0.19
d, Delay for Lane Group [s/veh]	21.99	32.86	33.20	23.35	35.78	36.72	29.84	44.93	31.34	27.46	59.38	30.71
Lane Group LOS	C	C	C	C	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.04	13.72	13.53	2.24	16.36	16.29	1.91	12.90	0.96	3.03	18.65	1.96
50th-Percentile Queue Length [ft]	25.96	343.10	338.24	56.00	409.03	407.23	47.79	322.41	24.00	75.71	466.30	49.08
95th-Percentile Queue Length [veh]	1.87	19.80	19.56	4.03	22.99	22.91	3.44	18.79	1.73	5.45	25.74	3.53
95th-Percentile Queue Length [ft]	46.73	494.99	489.05	100.79	574.87	572.71	86.03	469.65	43.19	136.29	643.38	88.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.99	33.02	33.20	23.35	36.21	36.72	29.84	44.93	31.34	27.46	59.38	30.71
Movement LOS	C	C	C	C	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	32.40			34.96			41.34			49.72		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	38.18											
Intersection LOS	D											
Intersection V/C	0.685											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	20	180	100	20	160	30	70	500	40	20	600	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	180	100	20	160	30	70	500	40	20	600	20
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	64	36	7	56	11	18	130	10	6	170	6
Total Analysis Volume [veh/h]	29	257	143	28	224	42	73	521	42	23	678	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	78	78	78	78
g / C, Green / Cycle	0.27	0.27	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.26	0.21	0.10	0.30	0.03	0.37
s, saturation flow rate [veh/h]	1664	1428	757	1868	860	1886
c, Capacity [veh/h]	484	421	391	1217	482	1228
d1, Uniform Delay [s]	42.58	38.09	21.04	10.42	15.98	11.59
k, delay calibration	0.35	0.22	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.62	4.31	1.06	1.27	0.19	1.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

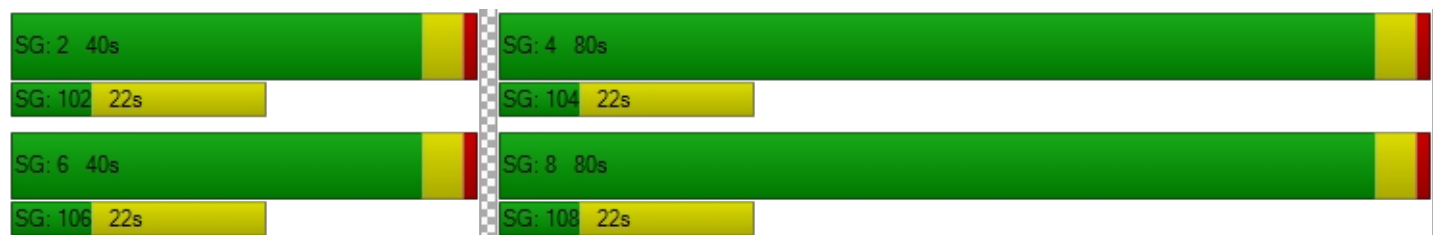
X, volume / capacity	0.89	0.70	0.19	0.46	0.05	0.57
d, Delay for Lane Group [s/veh]	58.20	42.40	22.09	11.69	16.16	13.52
Lane Group LOS	E	D	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	14.32	8.03	1.38	7.29	0.35	10.16
50th-Percentile Queue Length [ft]	358.06	200.66	34.49	182.23	8.82	253.89
95th-Percentile Queue Length [veh]	20.53	12.67	2.48	11.72	0.63	15.38
95th-Percentile Queue Length [ft]	513.23	316.82	62.07	292.92	15.87	384.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.20	58.20	58.20	42.40	42.40	42.40	22.09	11.69	11.69	16.16	13.52	13.52
Movement LOS	E	E	E	D	D	D	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	58.20			42.40			12.88			13.60		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	26.63											
Intersection LOS	C											
Intersection V/C	0.630											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.637

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	40	650	40	160	980	110	60	440	40	130	480	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	650	40	160	980	110	60	440	40	130	480	120
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	180	11	41	254	28	17	125	11	33	122	31
Total Analysis Volume [veh/h]	44	720	44	166	1016	114	68	500	45	132	489	122
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	53	53	65	56	56	46	33	33	46	37	37
g / C, Green / Cycle	0.54	0.44	0.44	0.54	0.47	0.47	0.38	0.28	0.28	0.38	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.07	0.20	0.20	0.19	0.30	0.31	0.06	0.26	0.03	0.12	0.26	0.08
s, saturation flow rate [veh/h]	637	1900	1850	884	1900	1794	1060	1900	1521	1117	1900	1455
c, Capacity [veh/h]	312	838	816	464	894	844	271	528	423	281	580	444
d1, Uniform Delay [s]	16.81	23.51	23.55	15.57	24.09	24.36	27.63	42.41	32.20	29.39	38.96	31.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.22	0.04	0.04	0.16	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.95	1.82	1.89	2.15	3.53	4.01	0.18	15.80	0.04	0.46	5.05	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.46	0.46	0.36	0.64	0.66	0.25	0.95	0.11	0.47	0.84	0.27
d, Delay for Lane Group [s/veh]	17.76	25.33	25.44	17.72	27.62	28.38	27.80	58.20	32.24	29.84	44.01	31.70
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.64	8.04	7.91	2.54	13.01	12.83	1.25	16.52	0.98	2.53	14.00	2.68
50th-Percentile Queue Length [ft]	16.02	201.00	197.73	63.55	325.21	320.68	31.23	413.12	24.39	63.14	349.91	67.03
95th-Percentile Queue Length [veh]	1.15	12.69	12.52	4.58	18.92	18.70	2.25	23.19	1.76	4.55	20.13	4.83
95th-Percentile Queue Length [ft]	28.84	317.26	313.04	114.39	473.08	467.52	56.21	579.79	43.90	113.65	503.30	120.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.76	25.38	25.44	17.72	27.95	28.38	27.80	58.20	32.24	29.84	44.01	31.70
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	24.97			26.68			52.92			39.47		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.68											
Intersection LOS	C											
Intersection V/C	0.637											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	30	290	100	50	330	40	40	490	10	20	610	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	290	100	50	330	40	40	490	10	20	610	60
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	81	28	15	101	12	11	140	3	6	179	18
Total Analysis Volume [veh/h]	34	325	112	61	405	49	46	559	11	24	717	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	35	35	35	35	35	35
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.04	0.19	0.08	0.06	0.24	0.03	0.07	0.33	0.01	0.03	0.42	0.06
s, saturation flow rate [veh/h]	895	1710	1370	948	1710	1425	671	1710	1365	776	1710	1265
c, Capacity [veh/h]	239	628	503	292	628	523	168	857	684	272	857	634
d1, Uniform Delay [s]	26.13	17.30	15.26	23.97	18.36	14.51	30.61	12.93	8.77	22.08	14.98	9.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.13	0.04	0.04	0.29	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	3.03	1.02	1.62	5.05	0.35	0.32	1.05	0.00	0.05	5.78	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

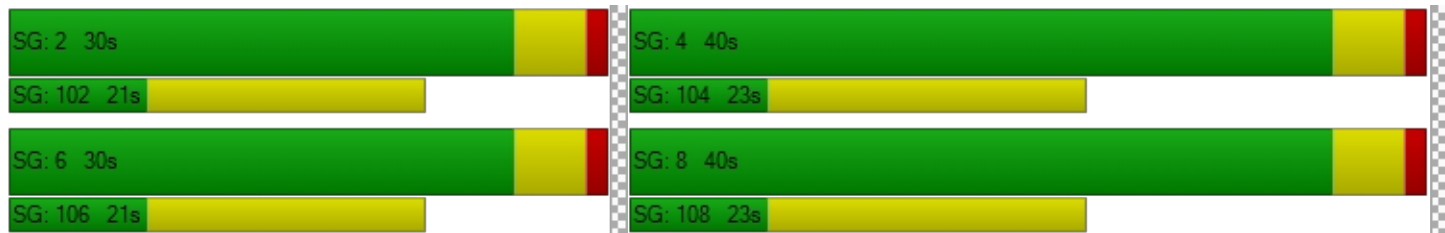
X, volume / capacity	0.14	0.52	0.22	0.21	0.65	0.09	0.27	0.65	0.02	0.09	0.84	0.11
d, Delay for Lane Group [s/veh]	27.37	20.33	16.28	25.60	23.41	14.87	30.94	13.97	8.78	22.13	20.76	9.25
Lane Group LOS	C	C	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.55	4.21	1.26	0.94	5.75	0.52	0.73	5.73	0.07	0.30	9.52	0.50
50th-Percentile Queue Length [ft]	13.86	105.30	31.56	23.57	143.79	12.93	18.22	143.23	1.85	7.59	238.09	12.53
95th-Percentile Queue Length [veh]	1.00	7.58	2.27	1.70	9.68	0.93	1.31	9.65	0.13	0.55	14.58	0.90
95th-Percentile Queue Length [ft]	24.95	189.45	56.80	42.42	242.12	23.28	32.80	241.37	3.32	13.67	364.62	22.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.37	20.33	16.28	25.60	23.41	14.87	30.94	13.97	8.78	22.13	20.76	9.25
Movement LOS	C	C	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.88			22.86			15.15			19.80		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.28											
Intersection LOS	B											
Intersection V/C	0.656											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	10	260	150	110	570	130	100	370	120	120	530	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	260	150	110	570	130	100	370	120	120	530	80
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	71	41	30	157	36	27	101	33	34	148	22
Total Analysis Volume [veh/h]	11	282	163	121	629	143	109	403	131	134	592	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	41	41	41	33	22	22	33	22	22
g / C, Green / Cycle	0.53	0.53	0.53	0.46	0.46	0.46	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.11	0.11	0.21	0.21	0.10	0.21	0.09	0.11	0.18	0.19
s, saturation flow rate [veh/h]	810	1900	1543	1098	1900	1745	1059	1900	1504	1227	1900	1775
c, Capacity [veh/h]	437	1004	816	461	869	798	379	461	365	373	466	435
d1, Uniform Delay [s]	11.22	11.77	11.21	21.63	16.79	16.89	20.61	32.80	28.31	21.46	31.45	31.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.07	0.06	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.70	0.55	1.39	1.74	1.97	0.25	3.16	0.22	0.22	0.91	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

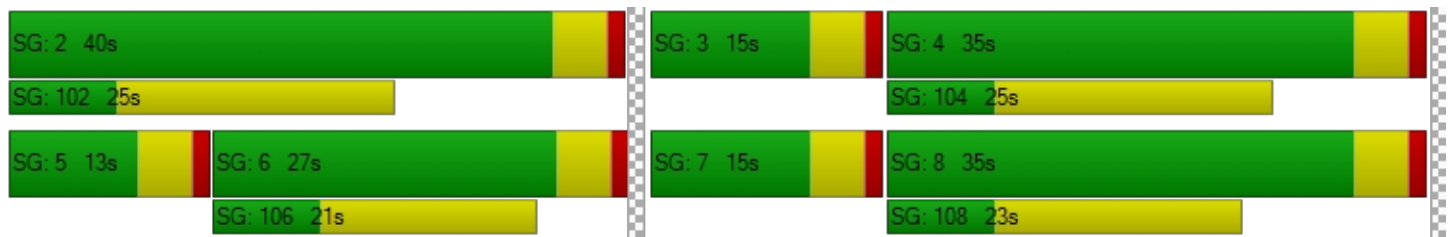
X, volume / capacity	0.03	0.28	0.20	0.26	0.46	0.47	0.29	0.87	0.36	0.36	0.75	0.76
d, Delay for Lane Group [s/veh]	11.32	12.47	11.76	23.01	18.54	18.86	20.86	35.96	28.53	21.68	32.36	32.68
Lane Group LOS	B	B	B	C	B	B	C	D	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.11	3.14	1.75	2.00	5.80	5.50	1.52	8.63	2.33	1.86	6.85	6.60
50th-Percentile Queue Length [ft]	2.79	78.56	43.67	50.11	144.95	137.58	38.08	215.64	58.21	46.44	171.16	164.91
95th-Percentile Queue Length [veh]	0.20	5.66	3.14	3.61	9.75	9.35	2.74	13.44	4.19	3.34	11.14	10.81
95th-Percentile Queue Length [ft]	5.01	141.40	78.61	90.21	243.67	233.75	68.55	336.05	104.78	83.59	278.44	270.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.32	12.47	11.76	23.01	18.65	18.86	20.86	35.96	28.53	21.68	32.49	32.68
Movement LOS	B	B	B	C	B	B	C	D	C	C	C	C
d_A, Approach Delay [s/veh]	12.19			19.28			31.89			30.73		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	24.34											
Intersection LOS	C											
Intersection V/C	0.484											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	390	70	80	0	210	0	820	440	150	910	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	390	70	80	0	210	0	820	440	150	910	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	109	20	24	0	63	0	225	121	39	234	0
Total Analysis Volume [veh/h]	11	436	78	96	0	251	0	900	483	154	936	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	7	52	52	52	12	68
g / C, Green / Cycle	0.02	0.26	0.26	0.06	0.43	0.43	0.43	0.10	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.03	0.09	0.36	0.42	0.09	0.26
s, saturation flow rate [veh/h]	1810	1900	1658	3514	2818	1900	1630	1810	3618
c, Capacity [veh/h]	33	490	428	199	1226	820	704	181	2063
d1, Uniform Delay [s]	58.18	38.34	38.95	54.89	21.03	30.46	33.65	53.10	14.94
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.21	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.34	0.48	0.67	0.03	10.28	29.87	18.39	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

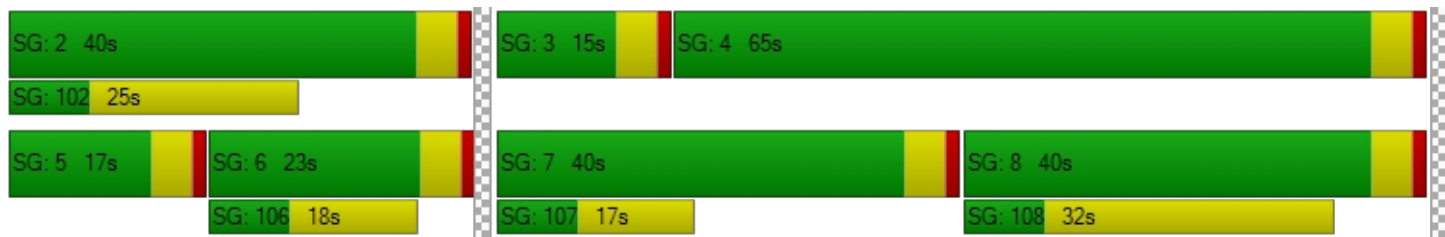
X, volume / capacity	0.33	0.54	0.59	0.48	0.20	0.84	0.98	0.85	0.45
d, Delay for Lane Group [s/veh]	60.32	38.67	39.43	55.56	21.06	40.75	63.52	71.48	15.67
Lane Group LOS	E	D	D	E	C	D	E	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.70	6.54	1.43	2.20	19.05	24.29	5.72	8.27
50th-Percentile Queue Length [ft]	8.75	167.48	163.44	35.72	55.10	476.17	607.25	142.90	206.73
95th-Percentile Queue Length [veh]	0.63	10.94	10.73	2.57	3.97	26.20	32.37	9.64	12.99
95th-Percentile Queue Length [ft]	15.75	273.60	268.27	64.29	99.17	655.10	809.32	240.92	324.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.98	39.43	55.56	0.00	21.06	0.00	46.02	63.52	71.48	15.67	0.00
Movement LOS	E	D	D	E		C		D	E	E	B	
d_A, Approach Delay [s/veh]	39.49			30.61			52.13			23.55		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	38.60											
Intersection LOS	D											
Intersection V/C	0.688											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1100	20	40	1230	30	60	70	30	40	90	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1100	20	40	1230	30	60	70	30	40	90	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	304	6	11	327	8	20	24	10	12	26	3
Total Analysis Volume [veh/h]	33	1217	22	43	1308	32	81	94	40	47	106	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.08	0.33	0.33	0.09	0.35	0.35	0.14	0.10
s, saturation flow rate [veh/h]	414	1900	1885	456	1900	1881	1506	1586
c, Capacity [veh/h]	287	1285	1275	316	1285	1272	376	389
d1, Uniform Delay [s]	12.00	6.23	6.23	11.28	6.49	6.50	29.08	27.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	1.30	1.32	0.90	1.53	1.55	0.51	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.48	0.48	0.14	0.52	0.52	0.57	0.42
d, Delay for Lane Group [s/veh]	12.82	7.53	7.55	12.18	8.01	8.05	29.59	27.78
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.37	4.25	4.23	0.46	4.81	4.79	3.69	2.65
50th-Percentile Queue Length [ft]	9.32	106.20	105.82	11.62	120.21	119.73	92.35	66.28
95th-Percentile Queue Length [veh]	0.67	7.63	7.61	0.84	8.40	8.38	6.65	4.77
95th-Percentile Queue Length [ft]	16.77	190.70	190.17	20.92	210.12	209.46	166.24	119.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.82	7.54	7.55	12.18	8.03	8.05	29.59	29.59	29.59	27.78	27.78	27.78
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.68			8.16			29.59			27.78		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.54											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	690	20	50	1160	30	40	130	20	80	150	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	690	20	50	1160	30	40	130	20	80	150	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	197	6	13	312	8	14	47	7	24	46	12
Total Analysis Volume [veh/h]	34	788	23	54	1248	32	58	188	29	97	182	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.08	0.21	0.22	0.08	0.34	0.34	0.18	0.23
s, saturation flow rate [veh/h]	438	1900	1874	680	1900	1879	1499	1397
c, Capacity [veh/h]	253	1137	1121	407	1137	1124	484	459
d1, Uniform Delay [s]	17.13	8.21	8.22	12.39	9.74	9.76	24.12	26.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.06
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.10	0.88	0.90	0.68	2.04	2.08	0.39	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

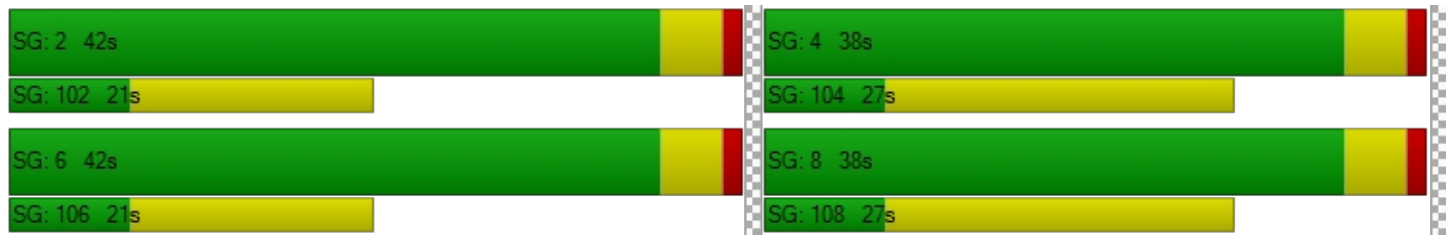
X, volume / capacity	0.13	0.36	0.36	0.13	0.57	0.57	0.57	0.71
d, Delay for Lane Group [s/veh]	18.23	9.09	9.12	13.07	11.78	11.84	24.51	27.75
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.49	3.42	3.39	0.60	6.52	6.49	4.23	5.71
50th-Percentile Queue Length [ft]	12.16	85.44	84.80	15.10	162.92	162.22	105.63	142.63
95th-Percentile Queue Length [veh]	0.88	6.15	6.11	1.09	10.70	10.67	7.60	9.62
95th-Percentile Queue Length [ft]	21.89	153.80	152.65	27.18	267.59	266.66	189.91	240.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.23	9.11	9.12	13.07	11.81	11.84	24.51	24.51	24.51	27.75	27.75	27.75
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.47			11.86			24.51			27.75		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.26											
Intersection LOS	B											
Intersection V/C	0.574											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	1070	10	20	1360	70	10	90	10	180	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1070	10	20	1360	70	10	90	10	180	80	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	307	3	5	362	19	3	26	3	49	22	5
Total Analysis Volume [veh/h]	34	1230	11	21	1450	75	12	104	12	195	87	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	20	20	20	20
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.26	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.10	0.33	0.33	0.05	0.40	0.41	0.09	0.01	0.22	0.01
s, saturation flow rate [veh/h]	347	1900	1893	455	1900	1859	1304	1561	1300	1556
c, Capacity [veh/h]	208	1198	1194	279	1198	1172	381	397	407	395
d1, Uniform Delay [s]	19.28	8.09	8.10	14.29	9.13	9.20	23.91	22.38	28.35	22.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	1.61	1.62	0.52	2.63	2.76	0.17	0.01	0.80	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

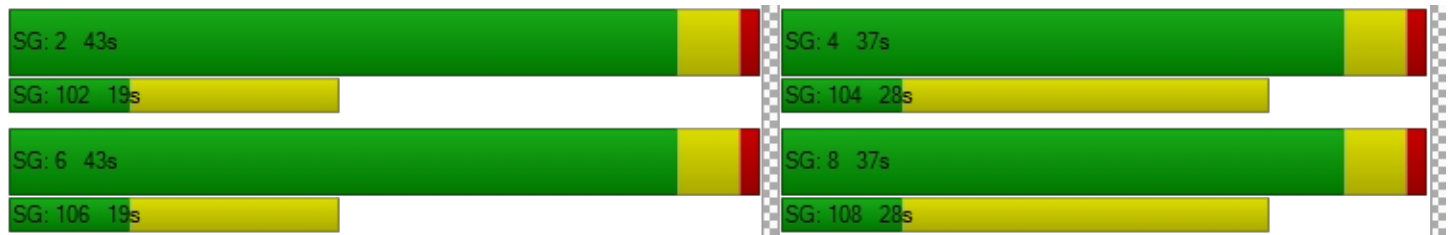
X, volume / capacity	0.16	0.52	0.52	0.08	0.64	0.65	0.30	0.03	0.69	0.06
d, Delay for Lane Group [s/veh]	20.96	9.70	9.71	14.82	11.76	11.96	24.07	22.39	29.15	22.54
Lane Group LOS	C	A	A	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.53	5.25	5.24	0.26	7.44	7.44	1.68	0.16	4.93	0.30
50th-Percentile Queue Length [ft]	13.32	131.25	130.99	6.45	186.01	185.96	41.91	4.09	123.13	7.55
95th-Percentile Queue Length [veh]	0.96	9.01	8.99	0.46	11.91	11.91	3.02	0.29	8.56	0.54
95th-Percentile Queue Length [ft]	23.97	225.19	224.83	11.61	297.85	297.78	75.43	7.36	214.12	13.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.96	9.71	9.71	14.82	11.86	11.96	24.07	24.07	22.39	29.15	29.15	22.54
Movement LOS	C	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.01			11.90			23.92			28.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.20											
Intersection LOS	B											
Intersection V/C	0.625											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1140	120	50	1350	160	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1140	120	50	1350	160	100
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	302	32	13	357	42	26
Total Analysis Volume [veh/h]	1209	127	53	1429	169	106
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	70	70	70	70	11	11
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.12	0.12
(v / s)_j Volume / Saturation Flow Rate	0.36	0.37	0.13	0.40	0.10	0.07
s, saturation flow rate [veh/h]	1863	1791	408	3547	1770	1556
c, Capacity [veh/h]	1440	1384	326	2741	221	194
d1, Uniform Delay [s]	3.61	3.69	8.14	3.88	38.05	36.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.08	1.21	1.07	0.71	5.48	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

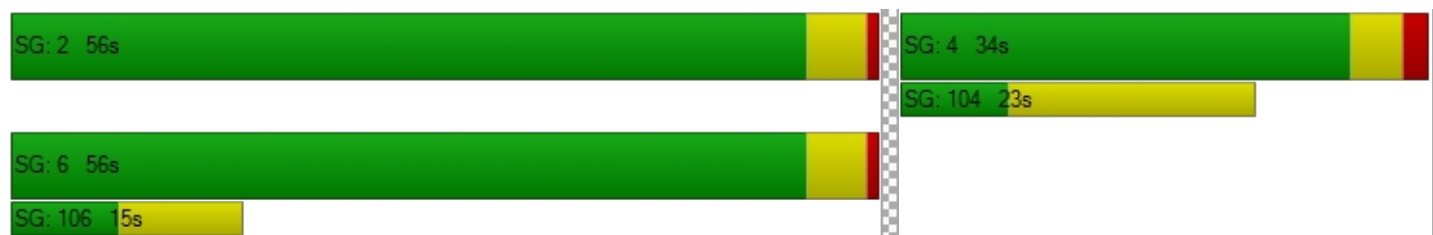
X, volume / capacity	0.46	0.48	0.16	0.52	0.77	0.55
d, Delay for Lane Group [s/veh]	4.69	4.90	9.21	4.59	43.53	39.33
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.09	3.19	0.52	3.60	3.84	2.26
50th-Percentile Queue Length [ft]	77.29	79.65	13.12	89.99	96.01	56.56
95th-Percentile Queue Length [veh]	5.56	5.74	0.94	6.48	6.91	4.07
95th-Percentile Queue Length [ft]	139.12	143.38	23.61	161.98	172.82	101.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.78	4.90	9.21	4.59	43.53	39.33
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.79		4.76		41.91	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.08					
Intersection LOS	A					
Intersection V/C	0.498					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	740	80	70	1260	50	100	300	50	30	210	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	740	80	70	1260	50	100	300	50	30	210	20
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	201	22	19	350	14	28	85	14	8	59	6
Total Analysis Volume [veh/h]	22	804	87	78	1401	56	113	340	57	34	236	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	29	21	21
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.06	0.24	0.24	0.12	0.39	0.39	0.32	0.17
s, saturation flow rate [veh/h]	370	1900	1819	633	1900	1864	1605	1679
c, Capacity [veh/h]	171	930	891	308	930	913	646	666
d1, Uniform Delay [s]	23.74	10.23	10.26	16.88	12.67	12.75	18.02	14.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.55	1.82	1.94	1.97	6.66	7.09	5.10	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

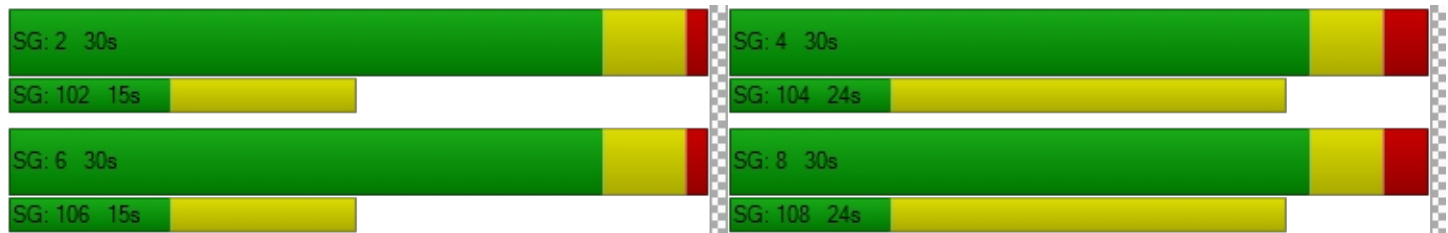
X, volume / capacity	0.13	0.49	0.49	0.25	0.79	0.79	0.79	0.44
d, Delay for Lane Group [s/veh]	25.29	12.05	12.20	18.85	19.33	19.84	23.12	14.87
Lane Group LOS	C	B	B	B	B	B	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.34	3.82	3.72	0.95	8.42	8.47	6.58	2.67
50th-Percentile Queue Length [ft]	8.57	95.45	93.06	23.86	210.42	211.87	164.62	66.68
95th-Percentile Queue Length [veh]	0.62	6.87	6.70	1.72	13.17	13.25	10.79	4.80
95th-Percentile Queue Length [ft]	15.42	171.81	167.51	42.95	329.37	331.23	269.83	120.02

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.29	12.11	12.20	18.85	19.58	19.84	23.12	23.12	23.12	14.87	14.87	14.87
Movement LOS	C	B	B	B	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	12.44			19.55			23.12			14.87		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	17.69											
Intersection LOS	B											
Intersection V/C	0.707											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.551

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	160	120	30	190	20	70	400	50	20	350	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	160	120	30	190	20	70	400	50	20	350	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	47	35	9	57	6	21	119	15	5	94	5
Total Analysis Volume [veh/h]	23	186	140	36	227	24	83	476	59	21	376	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	34	34
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.57	0.57
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.03	0.12	0.02	0.36	0.23
s, saturation flow rate [veh/h]	1166	1695	1045	1863	1529	1724	1836
c, Capacity [veh/h]	284	477	191	524	430	1042	1101
d1, Uniform Delay [s]	22.59	19.18	26.98	17.64	15.74	8.52	7.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	1.74	0.47	0.56	0.05	2.48	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

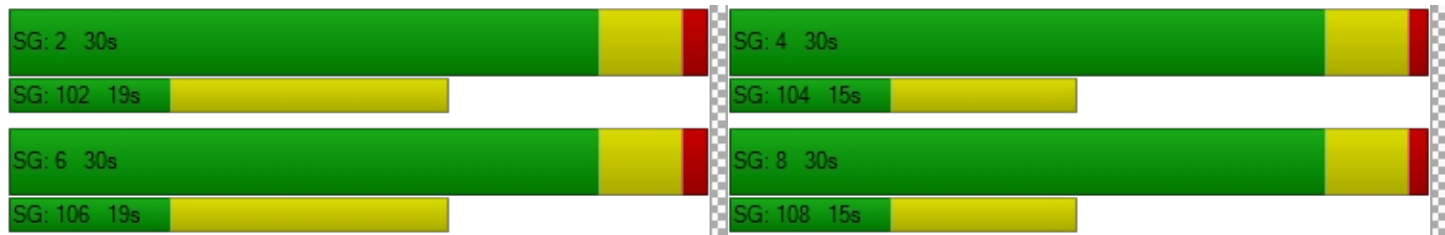
X, volume / capacity	0.08	0.68	0.19	0.43	0.06	0.59	0.38
d, Delay for Lane Group [s/veh]	22.71	20.91	27.45	18.21	15.79	11.00	8.29
Lane Group LOS	C	C	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.27	3.81	0.50	2.44	0.23	4.53	2.52
50th-Percentile Queue Length [ft]	6.82	95.31	12.42	60.88	5.71	113.37	63.11
95th-Percentile Queue Length [veh]	0.49	6.86	0.89	4.38	0.41	8.03	4.54
95th-Percentile Queue Length [ft]	12.27	171.55	22.36	109.58	10.27	200.67	113.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.71	20.91	20.91	27.45	18.21	15.79	11.00	11.00	11.00	8.29	8.29	8.29
Movement LOS	C	C	C	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	21.03			19.16			11.00			8.29		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	13.82											
Intersection LOS	B											
Intersection V/C	0.551											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	770	0	190	0	0	0	0	1230	310	140	1430	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	770	0	190	0	0	0	0	1230	310	140	1430	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	201	0	50	0	0	0	0	337	85	40	410	0
Total Analysis Volume [veh/h]	805	0	199	0	0	0	0	1347	339	160	1638	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	0	66	66	110	66	66	66
g / C, Green / Cycle	0.33	0.33	0.00	0.55	0.55	0.92	0.55	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.28	0.29	0.00	0.00	0.26	0.21	0.39	0.30	0.30
s, saturation flow rate [veh/h]	1810	1692	1863	305	5176	1595	412	3618	1900
c, Capacity [veh/h]	596	557	7	164	2854	1461	214	1995	1048
d1, Uniform Delay [s]	37.43	38.14	0.00	0.00	16.29	0.54	38.38	17.14	17.14
k, delay calibration	0.17	0.20	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.53	8.83	0.00	0.00	0.56	0.08	21.06	1.05	1.98
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

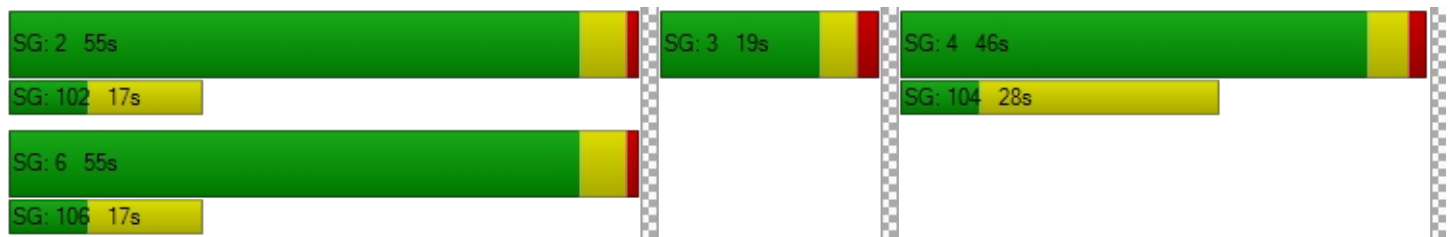
X, volume / capacity	0.85	0.89	0.00	0.00	0.47	0.23	0.75	0.54	0.54
d, Delay for Lane Group [s/veh]	42.96	46.97	0.00	0.00	16.86	0.62	59.44	18.19	19.13
Lane Group LOS	D	D	A	A	B	A	E	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	14.60	15.04	0.00	0.00	7.33	0.03	5.90	9.33	10.07
50th-Percentile Queue Length [ft]	365.07	376.05	0.00	0.00	183.27	0.82	147.43	233.17	251.75
95th-Percentile Queue Length [veh]	20.87	21.40	0.00	0.00	11.77	0.06	9.88	14.34	15.27
95th-Percentile Queue Length [ft]	521.74	535.06	0.00	0.00	294.29	1.47	246.99	358.39	381.86

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.45	46.97	46.97	0.00	0.00	0.00	0.00	16.86	0.62	59.44	18.51	19.13
Movement LOS	D	D	D	A	A	A	A	B	A	E	B	B
d_A, Approach Delay [s/veh]	44.94			0.00			13.59			22.15		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	24.04											
Intersection LOS	C											
Intersection V/C	0.682											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.599

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	160	70	30	240	30	30	110	100	20	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	160	70	30	240	30	30	110	100	20	190	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	49	22	9	69	9	9	31	28	5	52	8
Total Analysis Volume [veh/h]	12	198	87	34	274	34	34	125	113	22	208	33
Pedestrian Volume [ped/h]	17			9			15			28		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	572	571	564	549
Degree of Utilization, x	0.52	0.60	0.48	0.48

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.98	3.94	2.61	2.57
95th-Percentile Queue Length [ft]	74.57	98.60	65.18	64.32
Approach Delay [s/veh]	15.90	18.30	15.18	15.44
Approach LOS	C	C	C	C
Intersection Delay [s/veh]	16.33			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST) / MONTANA AVENUE \ (102)**

Control Type:	Signalized	Delay (sec / veh):	5.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.363

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	650	520	40	80	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	650	520	40	80	10
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	196	144	11	24	3
Total Analysis Volume [veh/h]	12	783	574	44	96	12
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	23	23	23	23	23
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	10	4
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.16
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.30	0.03	0.06
s, saturation flow rate [veh/h]	846	3618	1900	1577	1786
c, Capacity [veh/h]	416	1603	842	699	283
d1, Uniform Delay [s]	9.00	4.57	5.13	3.68	8.70
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.37	0.01	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.49	0.68	0.06	0.38
d, Delay for Lane Group [s/veh]	9.01	4.65	5.50	3.70	9.02
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.03	0.35	0.63	0.03	0.34
50th-Percentile Queue Length [ft]	0.86	8.78	15.80	0.82	8.53
95th-Percentile Queue Length [veh]	0.06	0.63	1.14	0.06	0.61
95th-Percentile Queue Length [ft]	1.54	15.80	28.44	1.47	15.36

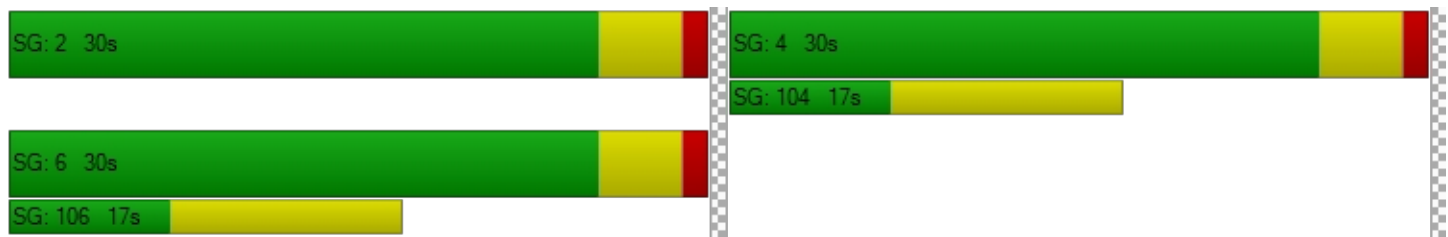


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.01	4.65	5.50	3.70	9.02	9.02
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.72		5.37		9.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.29					
Intersection LOS	A					
Intersection V/C	0.363					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \(\WEST\)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	300	3	3	412	184	161	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1201	10	10	1647	734	643	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		61	61	61	61	61	61	20	20
g / C, Green / Cycle		0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate		0.16	0.32	0.32	0.02	0.46	0.45	0.18	0.04
s, saturation flow rate [veh/h]		308	1900	1894	459	3618	1615	3514	1617
c, Capacity [veh/h]		194	1282	1279	305	2442	1090	782	360
d1, Uniform Delay [s]		21.23	6.97	6.97	11.95	8.71	8.70	33.22	28.41
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.03	1.25	1.26	0.20	1.51	3.33	2.23	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.25	0.47	0.47	0.03	0.67	0.67	0.82	0.20
d, Delay for Lane Group [s/veh]		24.26	8.22	8.23	12.15	10.23	12.03	35.45	28.68
Lane Group LOS		C	A	A	B	B	B	D	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		0.97	6.31	6.29	0.12	8.09	7.75	6.66	1.26
50th-Percentile Queue Length [ft]		24.30	157.63	157.26	2.88	202.19	193.74	166.43	31.39
95th-Percentile Queue Length [veh]		1.75	10.42	10.40	0.21	12.75	12.32	10.89	2.26
95th-Percentile Queue Length [ft]		43.75	260.58	260.09	5.19	318.78	307.88	272.22	56.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.26	8.23	8.23	12.15	10.23	12.03	35.45	28.68	28.68
Movement LOS				C	A	A	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	0.00			8.84			10.79			34.77		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.15											
Intersection LOS	B											
Intersection V/C	0.638											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	96.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.830

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	630	340	430	0	520	350	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	630	340	430	0	520	350	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	170	92	116	0	140	93	0	21
Total Analysis Volume [veh/h]	0	0	0	0	682	368	464	0	561	373	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.38	0.23	0.26	0.30	0.20	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.53	37.79	12.33	23.73	20.13
k, delay calibration		0.50	0.43	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		73.20	1.19	285.11	1.86	3.43	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		1.12	0.41	1.60	0.53	0.56	0.15
d, Delay for Lane Group [s/veh]		103.03	12.71	322.90	14.20	27.16	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		25.42	4.43	29.25	7.01	6.85	1.29
50th-Percentile Queue Length [ft]		635.48	110.85	731.14	175.19	171.19	32.26
95th-Percentile Queue Length [veh]		36.20	7.89	45.65	11.35	11.14	2.32
95th-Percentile Queue Length [ft]		905.08	197.19	1141.30	283.73	278.48	58.06

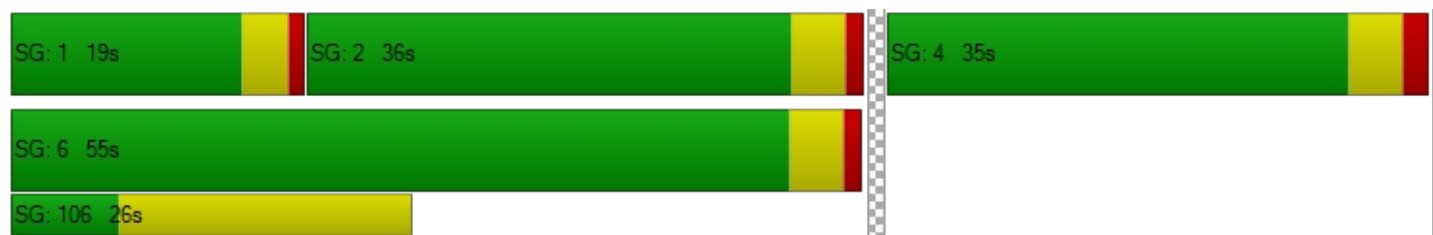


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	103.03	12.71	322.90	0.00	14.20	27.16	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			71.38			153.94			25.96		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	96.58											
Intersection LOS	F											
Intersection V/C	0.830											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	170	110	150	210	10	70	1000	50	0	1030	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	170	110	150	210	10	70	1000	50	0	1030	70
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	48	31	47	66	3	18	264	13	0	276	19
Total Analysis Volume [veh/h]	45	191	124	189	264	13	74	1055	53	0	1103	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	55	55	55	55	55
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.61	0.61	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.05	0.11	0.09	0.18	0.17	0.17	0.23	0.23	0.35	0.36
s, saturation flow rate [veh/h]	980	1676	1334	1037	1660	427	3192	1624	1676	1628
c, Capacity [veh/h]	253	489	389	310	484	204	1935	984	1016	987
d1, Uniform Delay [s]	32.00	25.49	24.90	33.34	27.11	27.48	9.06	9.09	10.77	10.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.51	0.47	1.94	1.07	4.96	0.57	1.12	2.41	2.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.39	0.32	0.61	0.57	0.36	0.38	0.38	0.58	0.60
d, Delay for Lane Group [s/veh]	32.33	26.00	25.37	35.27	28.18	32.44	9.63	10.21	13.18	13.60
Lane Group LOS	C	C	C	D	C	C	A	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.86	3.26	2.08	3.99	5.07	1.61	3.47	3.72	7.02	7.17
50th-Percentile Queue Length [ft]	21.45	81.55	51.89	99.86	126.71	40.35	86.73	92.96	175.48	179.27
95th-Percentile Queue Length [veh]	1.54	5.87	3.74	7.19	8.76	2.91	6.24	6.69	11.36	11.56
95th-Percentile Queue Length [ft]	38.61	146.79	93.39	179.74	219.01	72.64	156.12	167.32	284.11	289.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.33	26.00	25.37	35.27	28.18	28.18	32.44	9.81	10.21	0.00	13.38	13.60
Movement LOS	C	C	C	D	C	C	C	A	B		B	B
d_A, Approach Delay [s/veh]	26.57			31.05			11.24			13.39		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.67											
Intersection LOS	B											
Intersection V/C	0.544											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	41.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	1250	90	130	1360	80	220	620	120	110	640	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1250	90	130	1360	80	220	620	120	110	640	80
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	324	23	35	362	21	58	163	31	29	171	21
Total Analysis Volume [veh/h]	72	1294	93	138	1449	85	231	651	126	118	685	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	44	34	34	44	36	36	37	27	27	37	23	23
g / C, Green / Cycle	0.49	0.38	0.38	0.49	0.40	0.40	0.41	0.30	0.30	0.41	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.13	0.36	0.06	0.21	0.41	0.06	0.22	0.21	0.22	0.13	0.21	0.21
s, saturation flow rate [veh/h]	566	3547	1504	664	3547	1448	1051	1900	1750	918	1900	1791
c, Capacity [veh/h]	252	1349	572	291	1411	576	411	571	526	361	478	451
d1, Uniform Delay [s]	20.26	27.23	18.44	20.02	27.14	17.36	20.98	27.90	28.09	19.17	31.82	31.98
k, delay calibration	0.43	0.50	0.50	0.50	0.50	0.50	0.50	0.16	0.17	0.11	0.16	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.44	16.48	0.61	5.45	31.11	0.54	5.45	2.24	2.83	0.52	5.36	6.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.96	0.16	0.47	1.03	0.15	0.56	0.70	0.72	0.33	0.82	0.84
d, Delay for Lane Group [s/veh]	22.70	43.72	19.05	25.48	58.25	17.90	26.43	30.14	30.92	19.69	37.17	38.58
Lane Group LOS	C	D	B	C	F	B	C	C	C	B	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.92	15.92	1.35	1.94	20.34	1.18	3.76	7.63	7.33	1.57	8.57	8.42
50th-Percentile Queue Length [ft]	23.00	397.97	33.63	48.39	508.57	29.62	94.00	190.86	183.36	39.36	214.14	210.46
95th-Percentile Queue Length [veh]	1.66	22.46	2.42	3.48	28.27	2.13	6.77	12.17	11.78	2.83	13.37	13.18
95th-Percentile Queue Length [ft]	41.40	561.55	60.54	87.09	706.84	53.31	169.20	304.14	294.40	70.84	334.13	329.41

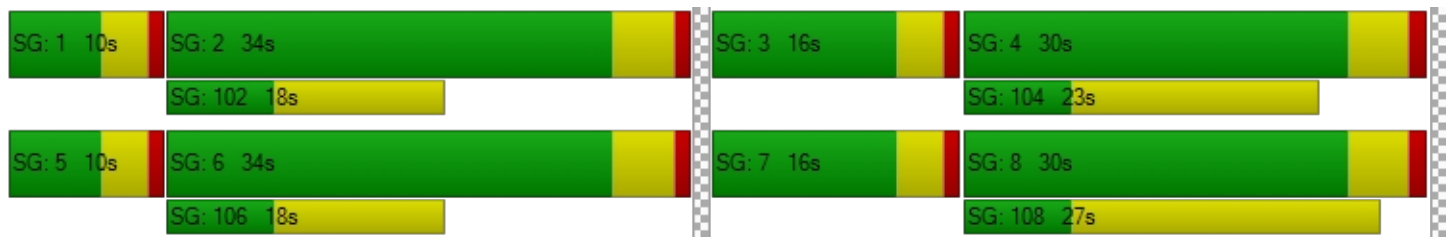


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.70	43.72	19.05	25.48	58.25	17.90	26.43	30.44	30.92	19.69	37.77	38.58
Movement LOS	C	D	B	C	F	B	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	41.11			53.49			29.58			35.45		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	41.91											
Intersection LOS	D											
Intersection V/C	0.738											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	690	180	0	990	120	110	870	70	70	850	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	690	180	0	990	120	110	870	70	70	850	40
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	175	46	0	268	32	29	227	18	19	230	11
Total Analysis Volume [veh/h]	51	699	182	0	1071	130	115	908	73	76	919	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	48	48	48	48	48	48
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.53	0.53	0.53	0.53	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.11	0.25	0.25	0.23	0.24	0.20	0.25	0.05	0.12	0.26	0.26
s, saturation flow rate [veh/h]	470	1863	1691	3547	1700	589	3618	1524	610	1900	1854
c, Capacity [veh/h]	154	690	626	1313	630	279	1908	804	290	1002	978
d1, Uniform Delay [s]	35.82	23.63	23.82	23.04	23.34	24.52	13.42	10.55	22.16	13.49	13.53
k, delay calibration	0.11	0.12	0.13	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	1.24	1.57	0.46	1.07	4.45	0.85	0.22	2.20	1.67	1.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.66	0.68	0.61	0.64	0.41	0.48	0.09	0.26	0.48	0.49
d, Delay for Lane Group [s/veh]	37.06	24.87	25.39	23.50	24.41	28.97	14.27	10.78	24.36	15.16	15.28
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.09	8.02	7.56	6.74	6.92	2.30	5.63	0.73	1.33	6.12	6.06
50th-Percentile Queue Length [ft]	27.34	200.43	189.12	168.42	173.12	57.42	140.84	18.35	33.28	153.10	151.53
95th-Percentile Queue Length [veh]	1.97	12.66	12.08	10.99	11.24	4.13	9.53	1.32	2.40	10.18	10.10
95th-Percentile Queue Length [ft]	49.21	316.53	301.89	274.83	281.02	103.36	238.15	33.03	59.90	254.56	252.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.06	25.05	25.39	0.00	23.73	24.41	28.97	14.27	10.78	24.36	15.22	15.28
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.77			23.81			15.58			15.89		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.20											
Intersection LOS	C											
Intersection V/C	0.508											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	66.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.823

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	160	900	80	210	1240	130	290	1230	240	160	1020	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	900	80	210	1240	130	290	1230	240	160	1020	140
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	244	22	58	342	36	74	314	61	42	267	37
Total Analysis Volume [veh/h]	173	976	87	232	1367	143	296	1257	245	167	1066	146
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	55	12	38	55	12	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.46	0.10	0.32	0.46	0.10	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.06	0.07	0.27	0.09	0.16	0.35	0.17	0.09	0.29	0.10
s, saturation flow rate [veh/h]	1810	5074	1572	3445	5074	1516	1810	3618	1438	1774	3618	1518
c, Capacity [veh/h]	187	1628	735	356	1628	709	187	1154	670	183	1154	484
d1, Uniform Delay [s]	53.37	34.28	18.01	51.75	37.90	18.79	53.83	40.88	20.65	53.28	39.47	30.80
k, delay calibration	0.23	0.50	0.50	0.11	0.50	0.50	0.50	0.20	0.50	0.22	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	28.96	1.64	0.33	2.01	5.38	0.64	285.88	46.65	1.54	26.45	7.20	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.92	0.60	0.12	0.65	0.84	0.20	1.58	1.09	0.37	0.91	0.92	0.30
d, Delay for Lane Group [s/veh]	82.33	35.92	18.34	53.76	43.28	19.43	339.72	87.53	22.20	79.73	46.67	31.54
Lane Group LOS	F	D	B	D	D	B	F	F	C	E	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.63	8.12	1.42	3.46	13.14	2.48	20.45	24.07	4.63	6.29	15.95	3.26
50th-Percentile Queue Length [ft]	165.73	203.02	35.42	86.49	328.59	61.90	511.19	601.87	115.63	157.14	398.78	81.56
95th-Percentile Queue Length [veh]	10.85	12.79	2.55	6.23	19.09	4.46	32.36	33.94	8.15	10.40	22.50	5.87
95th-Percentile Queue Length [ft]	271.29	319.85	63.75	155.67	477.23	111.42	808.92	848.54	203.81	259.94	562.53	146.81

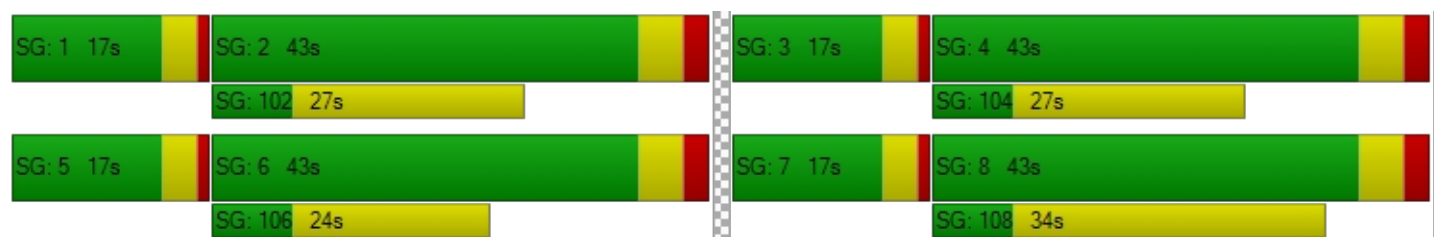


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	82.33	35.92	18.34	53.76	43.28	19.43	339.72	87.53	22.20	79.73	46.67	31.54
Movement LOS	F	D	B	D	D	B	F	F	C	E	D	C
d_A, Approach Delay [s/veh]	41.18			42.72			120.14			49.07		
Approach LOS	D			D			F			D		
d_I, Intersection Delay [s/veh]	66.45											
Intersection LOS	E											
Intersection V/C	0.823											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	173.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.123

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	2000	870	700	1610
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	2000	870	700	1610
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	514	224	191	439
Total Analysis Volume [veh/h]	0	0	2058	895	764	1757
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	36	36	45	85
g / C, Green / Cycle	0.40	0.40	0.50	0.95
(v / s)_i Volume / Saturation Flow Rate	0.64	0.63	0.48	0.55
s, saturation flow rate [veh/h]	3192	1421	1597	3192
c, Capacity [veh/h]	1261	562	803	3025
d1, Uniform Delay [s]	27.21	27.21	21.34	0.27
k, delay calibration	0.50	0.50	0.36	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	287.97	275.51	17.55	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.63	1.59	0.95	0.58
d, Delay for Lane Group [s/veh]	315.18	302.72	38.89	1.09
Lane Group LOS	F	F	D	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	63.18	54.32	17.59	0.34
50th-Percentile Queue Length [ft]	1579.53	1358.11	439.66	8.62
95th-Percentile Queue Length [veh]	98.77	85.20	24.46	0.62
95th-Percentile Queue Length [ft]	2469.20	2129.92	611.60	15.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	315.18	302.72	38.89	1.09
Movement LOS			F	F	D	A
d_A, Approach Delay [s/veh]	0.00		311.41		12.55	
Approach LOS	A		F		B	
d_I, Intersection Delay [s/veh]	173.77					
Intersection LOS	F					
Intersection V/C	1.123					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	57.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	60	1720	60	70	1510	60	180	370	80	90	310	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1720	60	70	1510	60	180	370	80	90	310	130
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	466	16	19	419	17	51	105	23	24	82	35
Total Analysis Volume [veh/h]	65	1864	65	78	1677	67	204	419	90	96	329	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	81	81	81	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.54	0.54	0.54	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.25	0.58	0.05	0.20	0.53	0.05	0.25	0.13	0.07	0.11	0.15	0.17
s, saturation flow rate [veh/h]	264	3192	1425	397	3192	1384	823	3192	1352	860	1676	1351
c, Capacity [veh/h]	81	1727	771	203	2030	880	173	966	409	207	508	409
d1, Uniform Delay [s]	70.33	34.40	16.55	33.73	20.94	10.44	66.72	41.94	39.03	56.12	42.62	43.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.11	0.11	0.11	0.11	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	56.59	46.66	0.21	5.42	4.01	0.17	112.88	0.31	0.27	1.62	0.70	1.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.81	1.08	0.08	0.38	0.83	0.08	1.18	0.43	0.22	0.46	0.48	0.55
d, Delay for Lane Group [s/veh]	126.92	81.06	16.76	39.15	24.95	10.61	179.59	42.24	39.30	57.75	43.33	44.99
Lane Group LOS	F	F	B	D	C	B	F	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	3.79	41.71	1.15	1.33	22.83	0.91	12.14	6.35	2.55	3.45	7.55	7.16
50th-Percentile Queue Length [ft]	94.65	1042.73	28.78	33.28	570.64	22.65	303.44	158.73	63.81	86.32	188.79	178.93
95th-Percentile Queue Length [veh]	6.81	55.69	2.07	2.40	30.66	1.63	19.51	10.48	4.59	6.21	12.06	11.54
95th-Percentile Queue Length [ft]	170.36	1392.14	51.81	59.90	766.52	40.76	487.79	262.05	114.86	155.37	301.46	288.62



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	126.92	81.06	16.76	39.15	24.95	10.61	179.59	42.24	39.30	57.75	43.76	44.99
Movement LOS	F	F	B	D	C	B	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	80.46			25.03			81.17			46.45		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	56.97											
Intersection LOS	E											
Intersection V/C	0.854											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.633

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	70	980	70	100	1230	70	110	520	90	120	480	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	980	70	100	1230	70	110	520	90	120	480	70
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	249	18	27	330	19	28	134	23	31	122	18
Total Analysis Volume [veh/h]	71	997	71	107	1322	75	113	534	92	122	489	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	51	51	51	51	51
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.21	0.22	0.22	0.23	0.29	0.29	0.15	0.32	0.07	0.16	0.34
s, saturation flow rate [veh/h]	346	3192	1614	474	3192	1626	762	1676	1402	780	1636
c, Capacity [veh/h]	138	1436	726	196	1436	732	193	782	654	218	763
d1, Uniform Delay [s]	43.25	21.38	21.41	37.21	23.42	23.45	44.76	22.98	16.76	42.16	23.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.06	1.21	2.41	10.45	2.23	4.36	1.05	1.47	0.04	0.83	2.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

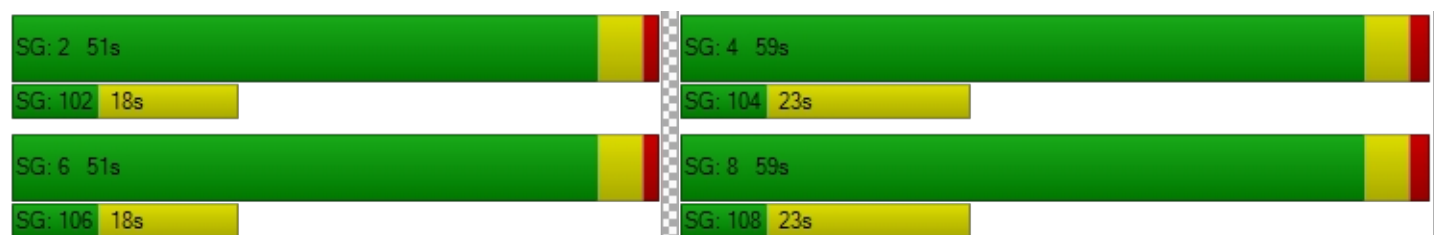
X, volume / capacity	0.51	0.49	0.50	0.55	0.64	0.65	0.59	0.68	0.14	0.56	0.73
d, Delay for Lane Group [s/veh]	56.32	22.59	23.82	47.67	25.66	27.81	45.81	24.45	16.80	42.99	26.25
Lane Group LOS	E	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.40	6.57	6.93	3.23	9.50	10.15	3.05	10.84	1.33	3.19	11.95
50th-Percentile Queue Length [ft]	60.00	164.30	173.29	80.67	237.53	253.77	76.25	271.04	33.22	79.70	298.78
95th-Percentile Queue Length [veh]	4.32	10.78	11.25	5.81	14.56	15.38	5.49	16.24	2.39	5.74	17.62
95th-Percentile Queue Length [ft]	108.00	269.40	281.24	145.21	363.91	384.39	137.24	406.03	59.79	143.45	440.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.32	22.95	23.82	47.67	26.31	27.81	45.81	24.45	16.80	42.99	26.25	26.25
Movement LOS	E	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	25.09			27.90			26.76			29.25		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.13											
Intersection LOS	C											
Intersection V/C	0.633											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	87.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	330	300	60	470	60	830	1620	100	30	720	290
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	330	300	60	470	60	830	1620	100	30	720	290
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	94	85	18	143	18	221	432	27	8	201	81
Total Analysis Volume [veh/h]	23	376	342	73	572	73	884	1726	107	34	805	324
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	41	32	52	41	28	28	69	62	62	69	49	62
g / C, Green / Cycle	0.35	0.27	0.43	0.35	0.24	0.24	0.58	0.52	0.52	0.58	0.41	0.52
(v / s)_j Volume / Saturation Flow Rate	0.02	0.12	0.22	0.07	0.20	0.20	0.90	0.48	0.49	0.09	0.22	0.20
s, saturation flow rate [veh/h]	1004	3080	1569	1100	1618	1546	979	1900	1857	372	3618	1581
c, Capacity [veh/h]	278	822	688	366	384	367	536	978	956	183	1484	829
d1, Uniform Delay [s]	29.26	36.77	24.21	28.48	43.81	43.89	32.74	27.30	27.89	27.05	26.85	17.09
k, delay calibration	0.11	0.11	0.50	0.11	0.16	0.16	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.40	2.56	0.26	7.69	8.54	299.94	17.06	20.62	2.23	1.43	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.46	0.50	0.20	0.86	0.86	1.65	0.94	0.96	0.19	0.54	0.39
d, Delay for Lane Group [s/veh]	29.38	37.17	26.77	28.75	51.50	52.44	332.69	44.36	48.51	29.28	28.28	18.48
Lane Group LOS	C	D	C	C	D	D	F	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.45	4.62	7.33	1.51	10.11	9.84	53.03	27.31	28.65	0.50	8.85	5.51
50th-Percentile Queue Length [ft]	11.37	115.46	183.13	37.63	252.87	246.11	1325.74	682.86	716.30	12.51	221.30	137.85
95th-Percentile Queue Length [veh]	0.82	8.14	11.76	2.71	15.33	14.99	86.69	35.89	37.43	0.90	13.73	9.37
95th-Percentile Queue Length [ft]	20.47	203.57	294.09	67.74	383.27	374.75	2167.20	897.13	935.76	22.52	343.28	234.13



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.38	37.17	26.77	28.75	51.90	52.44	332.69	46.31	48.51	29.28	28.28	18.48
Movement LOS	C	D	C	C	D	D	F	D	D	C	C	B
d_A, Approach Delay [s/veh]	32.13			49.60			139.57			25.58		
Approach LOS	C			D			F			C		
d_I, Intersection Delay [s/veh]	87.73											
Intersection LOS	F											
Intersection V/C	1.086											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	90	80	70	100	50	70	860	10	20	770	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	90	80	70	100	50	70	860	10	20	770	10
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	26	24	20	29	14	19	237	3	5	205	3
Total Analysis Volume [veh/h]	24	106	94	80	115	57	77	948	11	21	820	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	59	59	59	59
g / C, Green / Cycle	0.24	0.24	0.66	0.66	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.15	0.22	0.37	0.37	0.27	0.27
s, saturation flow rate [veh/h]	1456	1131	1302	1519	1599	1516
c, Capacity [veh/h]	395	326	901	997	1092	995
d1, Uniform Delay [s]	30.38	33.37	7.74	8.38	7.17	7.30
k, delay calibration	0.11	0.20	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	7.01	2.23	2.27	1.10	1.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.57	0.77	0.53	0.56	0.40	0.42
d, Delay for Lane Group [s/veh]	31.65	40.38	9.97	10.65	8.27	8.58
Lane Group LOS	C	D	A	B	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.36	5.91	4.23	5.47	3.58	3.49
50th-Percentile Queue Length [ft]	109.01	147.83	105.76	136.70	89.45	87.27
95th-Percentile Queue Length [veh]	7.78	9.90	7.60	9.30	6.44	6.28
95th-Percentile Queue Length [ft]	194.62	247.53	190.09	232.57	161.00	157.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.65	31.65	31.65	40.38	40.38	40.38	9.97	10.36	10.65	8.27	8.42	8.58
Movement LOS	C	C	C	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	31.65			40.38			10.33			8.42		
Approach LOS	C			D			B			A		
d_I, Intersection Delay [s/veh]	14.87											
Intersection LOS	B											
Intersection V/C	0.590											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	37.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.292

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	590	660	0	40	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	590	660	0	40	30
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	155	182	0	11	9
Total Analysis Volume [veh/h]	0	621	727	0	46	34
Pedestrian Volume [ped/h]	6		5		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.29	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	36.98	14.81
Movement LOS		A	A		E	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	1.14	0.28
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	28.56	6.91
d_A, Approach Delay [s/veh]	0.00		0.00		27.56	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.54					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	59.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	500	420	0	110	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	500	420	0	110	100
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	134	116	0	52	47
Total Analysis Volume [veh/h]	0	538	464	0	207	189
Pedestrian Volume [ped/h]	15		2		22	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.81	0.34
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	59.29	14.83
Movement LOS		A	A		F	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	6.25	1.50
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	156.29	37.61
d_A, Approach Delay [s/veh]	0.00		0.00		38.07	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	10.78					
Intersection LOS	F					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	240	10	10	250	30	10	0	0	10	10	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	240	10	10	250	30	10	0	0	10	10	30
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	68	3	3	66	8	10	0	0	3	3	10
Total Analysis Volume [veh/h]	23	272	11	10	262	31	40	0	0	14	14	42
Pedestrian Volume [ped/h]	33			30			12			7		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	794	801	643	715
Degree of Utilization, x	0.39	0.38	0.06	0.10

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	1.83	1.77	0.20	0.32
95th-Percentile Queue Length [ft]	45.66	44.33	4.96	8.10
Approach Delay [s/veh]	10.35	10.20	8.97	8.57
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.04			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	20	230	0	10	230	20	10	10	10	10	0	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	230	0	10	230	20	10	10	10	10	0	70
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	72	0	3	61	5	7	7	7	4	0	27
Total Analysis Volume [veh/h]	25	287	0	11	244	21	29	29	29	15	0	108
Pedestrian Volume [ped/h]	8			11			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	746	747	668	726
Degree of Utilization, x	0.42	0.37	0.13	0.17

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.08	1.71	0.45	0.61
95th-Percentile Queue Length [ft]	51.98	42.74	11.16	15.20
Approach Delay [s/veh]	11.26	10.62	9.20	8.98
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.46			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	58.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.068

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	80	240	50	160	70	370	440	80	20	400	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	80	240	50	160	70	370	440	80	20	400	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	24	72	16	51	22	101	121	22	6	114	11
Total Analysis Volume [veh/h]	48	96	288	64	204	89	405	482	88	23	457	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	30	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.33	0.56	0.56	0.03	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.51	0.19	0.60	0.06	0.22	0.25	0.06	0.02	0.24	0.04
s, saturation flow rate [veh/h]	283	1534	444	1505	1810	1900	1449	1509	1900	1095
c, Capacity [veh/h]	139	977	184	457	604	1064	812	52	496	286
d1, Uniform Delay [s]	29.71	7.30	27.74	23.21	25.74	11.66	9.27	42.61	32.37	25.66
k, delay calibration	0.50	0.06	0.50	0.04	0.50	0.50	0.50	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	85.56	0.09	232.37	0.08	5.85	1.39	0.27	2.22	11.63	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.03	0.29	1.46	0.19	0.67	0.45	0.11	0.45	0.92	0.16
d, Delay for Lane Group [s/veh]	115.27	7.39	260.11	23.28	31.59	13.06	9.54	44.84	44.00	25.76
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.42	2.30	14.80	1.36	8.18	5.66	0.82	0.53	10.98	0.76
50th-Percentile Queue Length [ft]	160.54	57.48	370.05	34.04	204.38	141.42	20.54	13.21	274.62	18.91
95th-Percentile Queue Length [veh]	10.77	4.14	25.15	2.45	12.86	9.56	1.48	0.95	16.42	1.36
95th-Percentile Queue Length [ft]	269.24	103.46	628.65	61.27	321.61	238.94	36.98	23.78	410.50	34.04

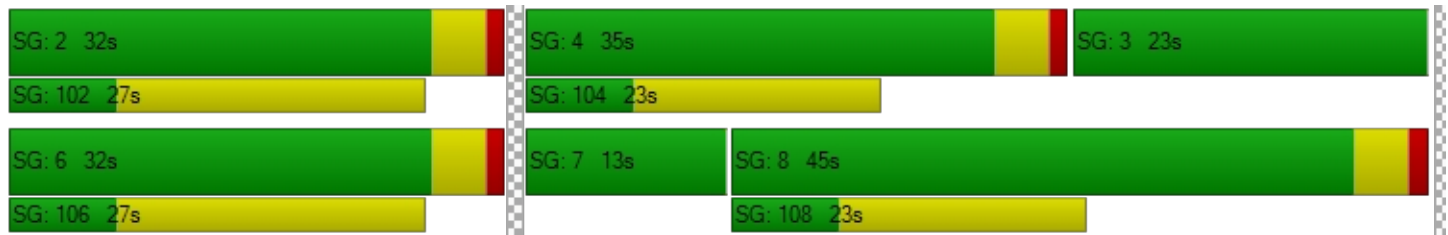


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	115.27	115.27	7.39	260.11	260.11	23.28	31.59	13.06	9.54	44.84	44.00	25.76
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	43.35			201.07			20.44			42.44		
Approach LOS	D			F			C			D		
d_I, Intersection Delay [s/veh]	57.97											
Intersection LOS	E											
Intersection V/C	1.068											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	50	890	70	170	740	40	250	350	250	40	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	890	70	170	740	40	250	350	250	40	190	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	242	19	45	194	11	67	93	67	12	55	9
Total Analysis Volume [veh/h]	54	969	76	179	778	42	267	374	267	47	221	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	42	42	42	39	39	39	24	24	24
g / C, Green / Cycle	0.33	0.33	0.33	0.46	0.46	0.46	0.44	0.44	0.44	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.05	0.20	0.22	0.03	0.19	0.20	0.17	0.05	0.07	0.07
s, saturation flow rate [veh/h]	688	3618	1449	879	3618	1437	1371	1900	1537	1005	1900	1776
c, Capacity [veh/h]	191	1194	478	383	1671	664	651	828	670	181	501	469
d1, Uniform Delay [s]	34.31	27.60	21.33	18.30	16.60	13.43	17.02	17.85	17.35	38.22	26.19	26.27
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.65	6.05	0.71	4.07	0.93	0.18	1.90	0.14	0.14	0.28	0.10	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.81	0.16	0.47	0.47	0.06	0.41	0.45	0.40	0.26	0.26	0.27
d, Delay for Lane Group [s/veh]	37.96	33.65	22.04	22.37	17.54	13.61	18.92	17.99	17.49	38.50	26.29	26.39
Lane Group LOS	D	C	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.25	10.17	1.21	2.49	5.34	0.48	3.86	5.26	3.66	0.97	2.14	2.10
50th-Percentile Queue Length [ft]	31.32	254.37	30.15	62.13	133.48	12.02	96.56	131.61	91.43	24.24	53.55	52.40
95th-Percentile Queue Length [veh]	2.25	15.41	2.17	4.47	9.13	0.87	6.95	9.03	6.58	1.75	3.86	3.77
95th-Percentile Queue Length [ft]	56.37	385.16	54.26	111.84	228.22	21.64	173.80	225.69	164.57	43.64	96.38	94.31

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.96	33.65	22.04	22.37	17.54	13.61	18.92	17.99	17.49	38.50	26.33	26.39
Movement LOS	D	C	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	33.06			18.24			18.12			28.23		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	24.04											
Intersection LOS	C											
Intersection V/C	0.529											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	150	130	70	160	50	140	820	60	20	450	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	150	130	70	160	50	140	820	60	20	450	30
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	43	37	20	46	14	37	214	16	6	135	9
Total Analysis Volume [veh/h]	11	170	147	80	182	57	146	857	63	24	542	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	50	50	58	46	46
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.64	0.55	0.55	0.64	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.10	0.10	0.07	0.13	0.15	0.25	0.25	0.03	0.15	0.16
s, saturation flow rate [veh/h]	1870	1467	1184	1793	1004	1900	1828	735	1900	1836
c, Capacity [veh/h]	513	369	183	451	697	1064	1023	508	986	953
d1, Uniform Delay [s]	27.85	28.00	40.21	29.07	6.53	11.55	11.60	6.65	12.29	12.33
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.26	0.61	0.36	0.05	1.31	1.40	0.18	0.76	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.35	0.40	0.44	0.53	0.21	0.44	0.44	0.05	0.30	0.30
d, Delay for Lane Group [s/veh]	28.00	28.26	40.82	29.43	6.58	12.86	13.00	6.82	13.06	13.14
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.11	2.55	1.71	4.30	0.98	5.49	5.40	0.17	3.41	3.37
50th-Percentile Queue Length [ft]	77.75	63.71	42.71	107.55	24.58	137.30	135.12	4.34	85.33	84.17
95th-Percentile Queue Length [veh]	5.60	4.59	3.07	7.70	1.77	9.34	9.22	0.31	6.14	6.06
95th-Percentile Queue Length [ft]	139.95	114.67	76.87	192.59	44.25	233.38	230.44	7.82	153.59	151.51

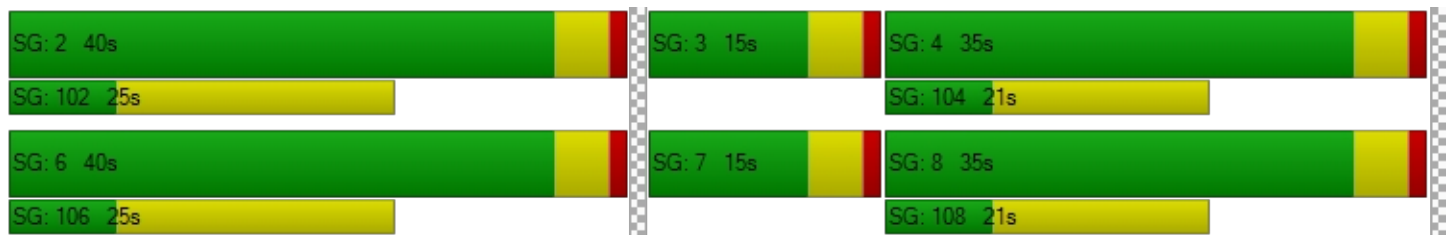


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.00	28.00	28.26	40.82	29.43	29.43	6.58	12.92	13.00	6.82	13.09	13.14
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	28.11			32.28			12.06			12.85		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.33											
Intersection LOS	B											
Intersection V/C	0.388											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	520	220	80	380	190	130	820	170	50	560	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	520	220	80	380	190	130	820	170	50	560	60
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	138	58	21	101	50	34	212	44	14	154	17
Total Analysis Volume [veh/h]	21	550	233	85	402	201	134	846	175	55	617	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	41	41	41	70	59	59	70	58	58
g / C, Green / Cycle	0.25	0.25	0.25	0.34	0.34	0.34	0.58	0.49	0.49	0.58	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.02	0.22	0.23	0.09	0.21	0.13	0.15	0.28	0.28	0.08	0.18	0.18
s, saturation flow rate [veh/h]	998	1900	1617	952	1900	1494	913	1900	1750	714	1900	1819
c, Capacity [veh/h]	115	470	400	258	648	510	528	939	865	390	922	883
d1, Uniform Delay [s]	54.72	43.34	44.09	30.73	33.00	30.07	12.39	21.21	21.40	13.62	19.42	19.47
k, delay calibration	0.04	0.15	0.19	0.14	0.04	0.04	0.30	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	7.28	15.07	0.96	0.36	0.18	0.70	2.41	2.76	0.76	1.17	1.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

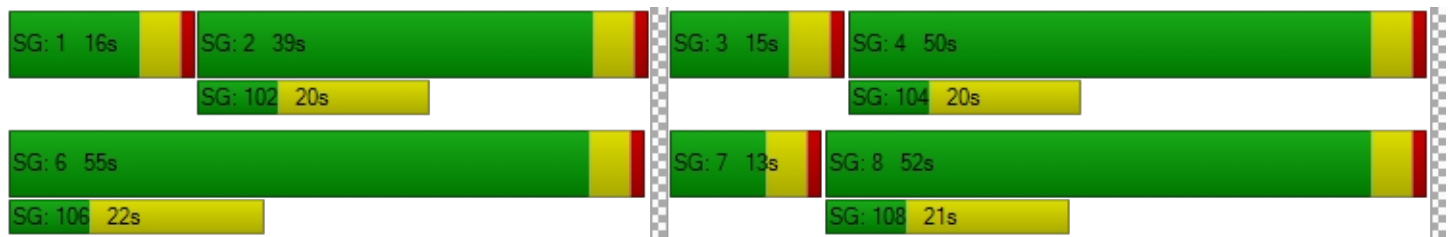
X, volume / capacity	0.18	0.88	0.93	0.33	0.62	0.39	0.25	0.56	0.57	0.14	0.38	0.38
d, Delay for Lane Group [s/veh]	55.00	50.63	59.16	31.69	33.37	30.25	13.09	23.61	24.16	14.38	20.59	20.71
Lane Group LOS	D	D	E	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.62	12.60	12.38	1.77	9.79	4.45	1.70	10.76	10.31	0.71	6.35	6.18
50th-Percentile Queue Length [ft]	15.56	315.05	309.43	44.23	244.71	111.37	42.49	269.11	257.83	17.70	158.71	154.43
95th-Percentile Queue Length [veh]	1.12	18.42	18.15	3.18	14.92	7.92	3.06	16.15	15.58	1.27	10.48	10.25
95th-Percentile Queue Length [ft]	28.01	460.59	453.67	79.62	372.98	197.91	76.47	403.63	389.49	31.86	262.01	256.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.00	52.78	59.16	31.69	33.37	30.25	13.09	23.82	24.16	14.38	20.64	20.71
Movement LOS	D	D	E	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	54.68			32.25			22.63			20.18		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	31.66											
Intersection LOS	C											
Intersection V/C	0.562											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	90	400	100	130	270	80	150	970	160	50	810	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	400	100	130	270	80	150	970	160	50	810	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	115	29	36	76	22	39	250	41	13	216	8
Total Analysis Volume [veh/h]	103	459	115	146	303	90	155	1001	165	53	862	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	10	46	46	12	65	65	48	48	48
g / C, Green / Cycle	0.26	0.26	0.26	0.09	0.38	0.38	0.10	0.54	0.54	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.10	0.24	0.08	0.08	0.16	0.06	0.09	0.31	0.33	0.11	0.24	0.24
s, saturation flow rate [veh/h]	1045	1900	1397	1810	1900	1433	1810	1900	1731	489	1900	1862
c, Capacity [veh/h]	190	491	361	157	729	549	183	1026	934	137	761	746
d1, Uniform Delay [s]	51.06	43.51	35.96	54.39	27.12	24.32	53.01	18.50	18.94	47.72	28.23	28.30
k, delay calibration	0.04	0.20	0.04	0.09	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	14.30	0.19	16.84	0.14	0.05	4.18	2.40	2.97	8.04	3.36	3.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.54	0.94	0.32	0.93	0.42	0.16	0.85	0.58	0.61	0.39	0.59	0.60
d, Delay for Lane Group [s/veh]	51.96	57.81	36.14	71.23	27.26	24.38	57.19	20.90	21.91	55.76	31.59	31.78
Lane Group LOS	D	E	D	E	C	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	3.03	15.02	2.73	5.07	6.31	1.68	4.80	11.49	11.36	1.80	10.79	10.69
50th-Percentile Queue Length [ft]	75.67	375.56	68.15	126.86	157.82	42.05	120.04	287.24	284.04	45.08	269.63	267.35
95th-Percentile Queue Length [veh]	5.45	21.38	4.91	8.77	10.43	3.03	8.40	17.05	16.89	3.25	16.17	16.06
95th-Percentile Queue Length [ft]	136.21	534.47	122.67	219.22	260.83	75.69	209.88	426.21	422.24	81.15	404.28	401.43



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.96	57.81	36.14	71.23	27.26	24.38	57.19	21.31	21.91	55.76	31.68	31.78
Movement LOS	D	E	D	E	C	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.24			38.69			25.59			33.03		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	35.01											
Intersection LOS	D											
Intersection V/C	0.652											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└			┌└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	60	150	156	130	100	170	1210	220	30	940	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	60	150	156	130	100	170	1210	220	30	940	30
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	17	42	44	41	32	45	321	58	8	261	8
Total Analysis Volume [veh/h]	23	67	168	175	164	126	180	1283	233	33	1045	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	14	71	71	5	62	62
g / C, Green / Cycle	0.26	0.26	0.11	0.59	0.59	0.04	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.14	0.24	0.10	0.40	0.42	0.02	0.45	0.29
s, saturation flow rate [veh/h]	1644	1200	1810	1900	1767	1810	1200	1871
c, Capacity [veh/h]	419	306	206	1123	1045	71	619	966
d1, Uniform Delay [s]	38.85	43.91	52.25	16.81	17.39	56.37	25.58	19.67
k, delay calibration	0.04	0.28	0.19	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	27.85	17.42	3.38	4.22	1.77	15.85	2.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

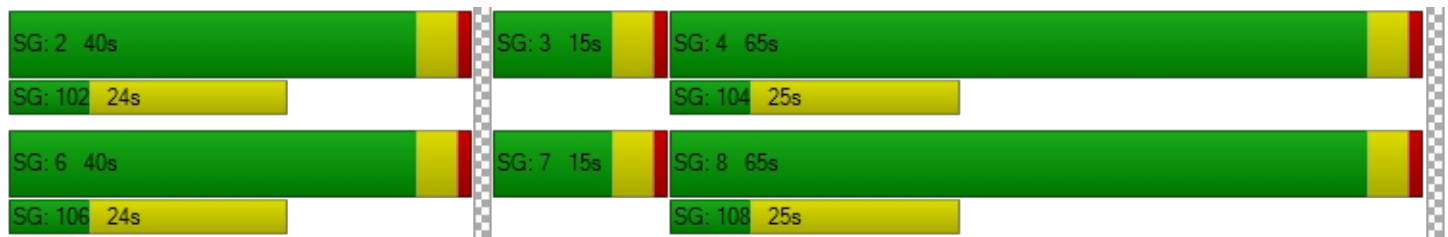
X, volume / capacity	0.56	0.95	0.87	0.68	0.72	0.47	0.87	0.56
d, Delay for Lane Group [s/veh]	39.29	71.76	69.66	20.19	21.61	58.13	41.43	21.96
Lane Group LOS	D	E	E	C	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.07	10.75	6.32	14.88	15.19	1.01	15.82	10.57
50th-Percentile Queue Length [ft]	151.65	268.83	158.01	371.99	379.64	25.35	395.42	264.35
95th-Percentile Queue Length [veh]	10.11	16.13	10.44	21.21	21.58	1.83	22.34	15.91
95th-Percentile Queue Length [ft]	252.63	403.28	261.09	530.15	539.41	45.63	558.48	397.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	39.29	39.29	0.00	71.76	71.76	69.66	20.76	21.61	58.13	32.06	21.96
Movement LOS		D	D		E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]		39.29			71.76			26.07			32.53	
Approach LOS		D			E			C			C	
d_I, Intersection Delay [s/veh]		33.13										
Intersection LOS		C										
Intersection V/C		0.793										

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	70.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.946

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	520	280	860	240	740	0	0	1220	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	520	280	860	240	740	0	0	1220	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	74	228	63	195	0	0	317	10
Total Analysis Volume [veh/h]	0	0	0	552	297	912	253	779	0	0	1268	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	19	75	52	52
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.15	0.63	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate	0.23	0.23	0.32	0.29	0.14	0.22	0.49	0.49
s, saturation flow rate [veh/h]	1810	1872	1418	1559	1810	3618	1800	900
c, Capacity [veh/h]	534	552	419	460	279	2272	784	392
d1, Uniform Delay [s]	38.84	38.59	42.25	42.10	49.84	10.56	33.84	33.84
k, delay calibration	0.26	0.24	0.50	0.43	0.20	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.13	5.13	70.24	36.81	17.36	0.41	68.24	80.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.79	0.77	1.09	0.99	0.91	0.34	1.11	1.11
d, Delay for Lane Group [s/veh]	44.97	43.71	112.4	78.90	67.19	10.97	102.08	113.95
Lane Group LOS	D	D	F	E	E	B	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	11.87	11.81	20.00	17.54	8.78	4.85	18.49	19.78
50th-Percentile Queue Length [ft]	296.8	295.1	499.9	438.5	219.56	121.17	462.21	494.52
95th-Percentile Queue Length [veh]	17.52	17.44	28.81	24.41	13.64	8.46	27.48	29.15
95th-Percentile Queue Length [ft]	438.0	436.0	720.2	610.3	341.06	211.43	686.95	728.70



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	44.68	43.71	95.70	67.19	10.97	0.00	0.00	105.78	113.95
Movement LOS				D	D	F	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			70.94			24.76			106.04		
Approach LOS	A			E			C			F		
d_I, Intersection Delay [s/veh]	70.53											
Intersection LOS	E											
Intersection V/C	0.946											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	116.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.041

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤵⤴⤵						⤵⤴⤵			⤵⤴⤵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	190	320	230	0	0	0	0	780	390	550	1310	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	320	230	0	0	0	0	780	390	550	1310	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	96	69	0	0	0	0	207	104	147	349	0
Total Analysis Volume [veh/h]	228	384	276	0	0	0	0	829	415	586	1397	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23		70	70	70	13	88
g / C, Green / Cycle	0.19	0.19	0.19		0.59	0.59	0.59	0.11	0.73
(v / s)_i Volume / Saturation Flow Rate	0.17	0.17	0.17		0.17	0.20	0.62	0.24	0.39
s, saturation flow rate [veh/h]	1834	1729	1581		3618	1557	500	2400	3618
c, Capacity [veh/h]	351	331	303		2119	912	293	258	2647
d1, Uniform Delay [s]	47.36	47.35	47.52		12.43	12.86	24.85	53.54	7.03
k, delay calibration	0.16	0.16	0.17		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.58	12.13	15.22		0.03	0.08	69.83	582.70	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.90	0.90	0.91		0.29	0.34	1.06	2.27	0.53
d, Delay for Lane Group [s/veh]	58.93	59.48	62.73		12.46	12.94	94.68	636.24	7.79
Lane Group LOS	E	E	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	10.20	9.66	9.25		4.02	4.17	13.24	24.80	7.17
50th-Percentile Queue Length [ft]	254.93	241.57	231.28		100.50	104.30	330.89	620.10	179.21
95th-Percentile Queue Length [veh]	15.43	14.76	14.24		7.24	7.51	20.07	40.36	11.56
95th-Percentile Queue Length [ft]	385.86	369.02	355.98		180.89	187.73	501.83	1008.94	288.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.93	59.36	62.73	0.00	0.00	0.00	0.00	12.46	74.20	636.24	7.79	0.00
Movement LOS	E	E	E					B	E	F	A	
d_A, Approach Delay [s/veh]	60.30			0.00			33.14			193.50		
Approach LOS	E			A			C			F		
d_I, Intersection Delay [s/veh]	116.28											
Intersection LOS	F											
Intersection V/C	1.041											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	140	360	60	130	1050	120	80	1040	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	140	360	60	130	1050	120	80	1040	90
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	40	103	17	38	307	35	21	279	24
Total Analysis Volume [veh/h]	107	437	139	160	412	69	152	1227	140	86	1118	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	12	34	34	10	52	52	7	49	49
g / C, Green / Cycle	0.07	0.25	0.25	0.10	0.28	0.28	0.09	0.43	0.43	0.06	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.09	0.13	0.13	0.08	0.34	0.09	0.05	0.31	0.06
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1781	1810	3618	1561	1810	3618	1575
c, Capacity [veh/h]	133	476	395	187	533	500	157	1571	678	109	1475	642
d1, Uniform Delay [s]	54.79	43.80	36.98	52.94	35.69	35.79	54.65	29.07	21.10	55.65	30.47	22.43
k, delay calibration	0.04	0.23	0.11	0.19	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	14.16	0.53	17.16	0.62	0.69	26.28	3.93	0.69	4.68	3.69	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.81	0.92	0.35	0.86	0.46	0.47	0.97	0.78	0.21	0.79	0.76	0.15
d, Delay for Lane Group [s/veh]	59.13	57.95	37.51	70.10	36.31	36.48	80.93	33.00	21.79	60.33	34.16	22.93
Lane Group LOS	E	E	D	E	D	D	F	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	14.29	3.39	5.59	5.99	5.75	5.68	15.47	2.55	2.69	14.21	1.81
50th-Percentile Queue Length [ft]	83.01	357.26	84.85	139.82	149.71	143.77	142.07	386.77	63.77	67.26	355.20	45.19
95th-Percentile Queue Length [veh]	5.98	20.49	6.11	9.47	10.00	9.68	9.59	21.92	4.59	4.84	20.39	3.25
95th-Percentile Queue Length [ft]	149.41	512.25	152.74	236.79	250.04	242.10	239.80	548.04	114.78	121.06	509.75	81.34

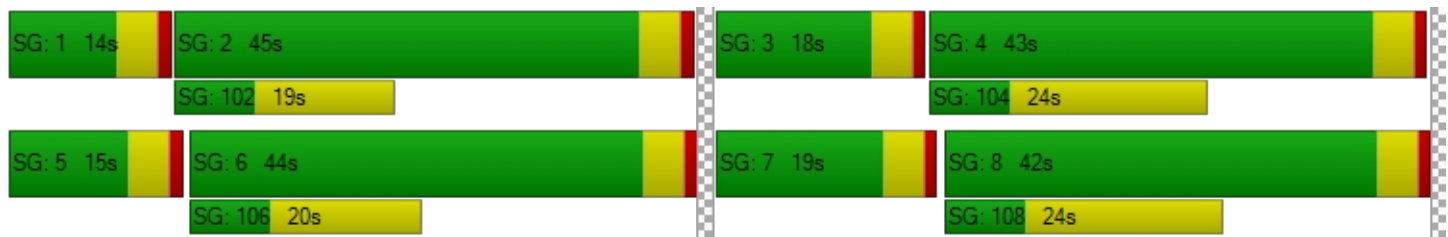


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	57.95	37.51	70.10	36.38	36.48	80.93	33.00	21.79	60.33	34.16	22.93
Movement LOS	E	E	D	E	D	D	F	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.98			44.81			36.76			35.05		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.31											
Intersection LOS	D											
Intersection V/C	0.711											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	40	660	10	120	600	70	80	390	30	80	340	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	660	10	120	600	70	80	390	30	80	340	10
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	177	3	32	162	19	22	105	8	24	103	3
Total Analysis Volume [veh/h]	43	709	11	129	647	76	86	419	32	97	411	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.06	0.19	0.19	0.17	0.19	0.19	0.09	0.22	0.02	0.10	0.22
s, saturation flow rate [veh/h]	741	1900	1887	740	1900	1821	975	1900	1570	980	1889
c, Capacity [veh/h]	394	1042	1035	396	1042	999	212	640	528	216	636
d1, Uniform Delay [s]	14.79	10.07	10.08	16.69	10.12	10.13	33.61	22.58	17.97	33.73	22.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.91	0.92	2.18	0.94	0.99	0.47	0.43	0.02	0.55	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.35	0.35	0.33	0.35	0.36	0.41	0.66	0.06	0.45	0.67
d, Delay for Lane Group [s/veh]	15.35	10.99	11.00	18.87	11.06	11.13	34.08	23.01	17.98	34.27	23.13
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.53	3.44	3.43	1.82	3.53	3.42	1.57	6.34	0.38	1.78	6.43
50th-Percentile Queue Length [ft]	13.19	86.09	85.73	45.61	88.25	85.50	39.26	158.42	9.58	44.62	160.70
95th-Percentile Queue Length [veh]	0.95	6.20	6.17	3.28	6.35	6.16	2.83	10.47	0.69	3.21	10.59
95th-Percentile Queue Length [ft]	23.73	154.95	154.31	82.10	158.85	153.90	70.67	261.64	17.24	80.32	264.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.35	10.99	11.00	18.87	11.09	11.13	34.08	23.01	17.98	34.27	23.13	23.13
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.24			12.27			24.48			25.21		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.95											
Intersection LOS	B											
Intersection V/C	0.419											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.471

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	560	30	60	600	50	20	250	40	110	500	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	560	30	60	600	50	20	250	40	110	500	150
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	155	8	16	161	13	6	73	12	30	135	40
Total Analysis Volume [veh/h]	100	621	33	64	643	54	23	291	47	119	539	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	30	30	30	30	30
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.17	0.08	0.19	0.19	0.03	0.18	0.11	0.28	0.10
s, saturation flow rate [veh/h]	759	1900	1860	791	1900	1840	880	1842	1055	1900	1578
c, Capacity [veh/h]	412	1070	1048	432	1070	1037	127	616	255	635	528
d1, Uniform Delay [s]	16.43	10.38	10.39	15.07	10.53	10.55	41.43	24.42	35.26	27.83	22.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.13	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.40	0.75	0.77	0.72	0.83	0.86	0.25	0.28	0.49	3.80	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.24	0.31	0.31	0.15	0.33	0.33	0.18	0.55	0.47	0.85	0.31
d, Delay for Lane Group [s/veh]	17.83	11.13	11.16	15.79	11.36	11.41	41.68	24.70	35.75	31.63	22.34
Lane Group LOS	B	B	B	B	B	B	D	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.42	3.33	3.28	0.83	3.62	3.54	0.50	5.66	2.42	10.87	2.46
50th-Percentile Queue Length [ft]	35.49	83.14	81.95	20.85	90.45	88.45	12.38	141.50	60.42	271.74	61.62
95th-Percentile Queue Length [veh]	2.56	5.99	5.90	1.50	6.51	6.37	0.89	9.56	4.35	16.28	4.44
95th-Percentile Queue Length [ft]	63.88	149.66	147.52	37.53	162.82	159.22	22.28	239.05	108.76	406.92	110.92

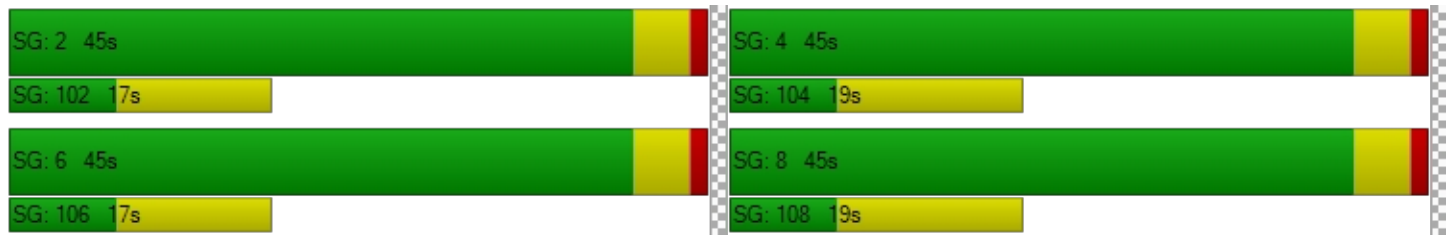


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.83	11.14	11.16	15.79	11.38	11.41	41.68	24.70	24.70	35.75	31.63	22.34
Movement LOS	B	B	B	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.03			11.75			25.78			30.39		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.38											
Intersection LOS	B											
Intersection V/C	0.471											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	430	40	80	360	60	70	190	50	30	110	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	430	40	80	360	60	70	190	50	30	110	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	120	11	21	94	16	18	50	13	8	30	13
Total Analysis Volume [veh/h]	56	481	45	83	375	63	73	198	52	32	118	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	24	27	27	27
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.45	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.06	0.29	0.09	0.24	0.19	0.09	0.04
s, saturation flow rate [veh/h]	943	1842	888	1796	1681	1739	1508
c, Capacity [veh/h]	283	739	232	720	823	848	672
d1, Uniform Delay [s]	21.84	15.08	25.29	14.25	11.22	10.02	9.57
k, delay calibration	0.04	0.06	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.77	0.35	0.31	1.41	0.46	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

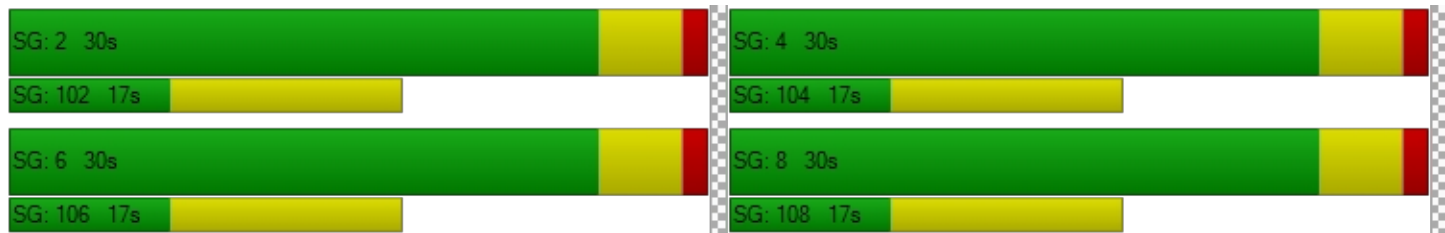
X, volume / capacity	0.20	0.71	0.36	0.61	0.39	0.18	0.08
d, Delay for Lane Group [s/veh]	21.96	15.85	25.63	14.56	12.63	10.47	9.80
Lane Group LOS	C	B	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.66	5.39	1.09	4.18	2.82	1.14	0.40
50th-Percentile Queue Length [ft]	16.48	134.69	27.31	104.42	70.53	28.58	10.00
95th-Percentile Queue Length [veh]	1.19	9.19	1.97	7.52	5.08	2.06	0.72
95th-Percentile Queue Length [ft]	29.67	229.86	49.15	187.95	126.95	51.45	18.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.96	15.85	15.85	25.63	14.56	14.56	12.63	12.63	12.63	10.47	10.47	9.80
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	16.44			16.33			12.63			10.29		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.88											
Intersection LOS	B											
Intersection V/C	0.478											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.506

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	80	940	20	60	930	80	90	370	90	90	280	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	940	20	60	930	80	90	370	90	90	280	50
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	267	6	16	249	21	24	99	24	27	85	15
Total Analysis Volume [veh/h]	91	1070	23	64	996	86	97	398	97	109	339	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.17	0.29	0.29	0.12	0.29	0.30	0.10	0.21	0.06	0.11	0.18	0.04
s, saturation flow rate [veh/h]	526	1900	1880	523	1900	1802	1020	1900	1547	991	1900	1465
c, Capacity [veh/h]	261	1028	1017	263	1028	975	268	654	532	232	654	504
d1, Uniform Delay [s]	22.02	11.85	11.86	20.39	11.84	11.97	30.13	21.76	18.35	33.00	20.94	17.95
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.64	1.99	2.02	2.19	1.98	2.21	0.31	0.34	0.06	0.55	0.24	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.35	0.53	0.54	0.24	0.53	0.55	0.36	0.61	0.18	0.47	0.52	0.12
d, Delay for Lane Group [s/veh]	25.66	13.83	13.88	22.58	13.83	14.18	30.43	22.10	18.41	33.56	21.18	17.99
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.57	6.04	6.02	1.02	6.04	5.99	1.68	5.94	1.22	2.04	4.95	0.76
50th-Percentile Queue Length [ft]	39.34	151.12	150.45	25.45	151.09	149.65	41.95	148.46	30.42	51.00	123.81	19.07
95th-Percentile Queue Length [veh]	2.83	10.08	10.04	1.83	10.08	10.00	3.02	9.94	2.19	3.67	8.60	1.37
95th-Percentile Queue Length [ft]	70.81	251.92	251.02	45.81	251.88	249.96	75.52	248.38	54.76	91.80	215.05	34.33

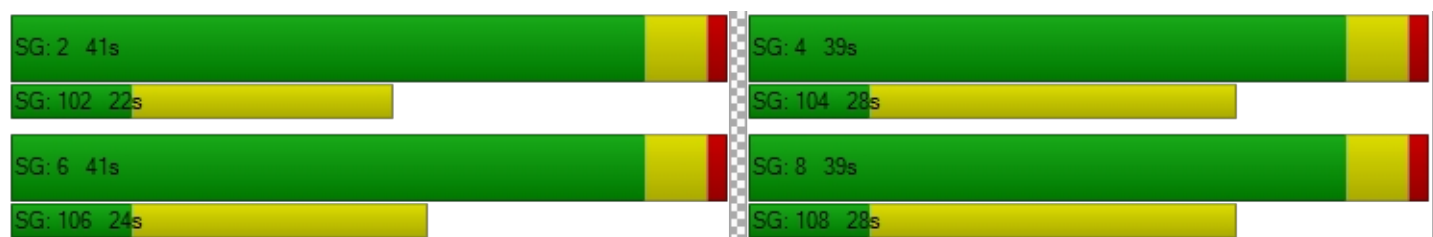


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.66	13.86	13.88	22.58	13.99	14.18	30.43	22.10	18.41	33.56	21.18	17.99
Movement LOS	C	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	14.76			14.48			22.86			23.45		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.36											
Intersection LOS	B											
Intersection V/C	0.506											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	160	60	60	140	70	50	450	60	20	310	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	160	60	60	140	70	50	450	60	20	310	20
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	44	17	19	45	22	13	119	16	5	83	5
Total Analysis Volume [veh/h]	11	177	66	76	178	89	53	477	64	21	330	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.21	0.32	0.06	0.05	0.25	0.04	0.02	0.17	0.01
s, saturation flow rate [veh/h]	1218	784	1579	1059	1900	1537	929	1900	1540
c, Capacity [veh/h]	463	326	539	543	1033	836	436	1033	837
d1, Uniform Delay [s]	20.78	22.24	18.40	13.78	11.11	8.68	16.15	10.07	8.44
k, delay calibration	0.15	0.39	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.43	13.51	0.14	0.36	1.48	0.18	0.21	0.82	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

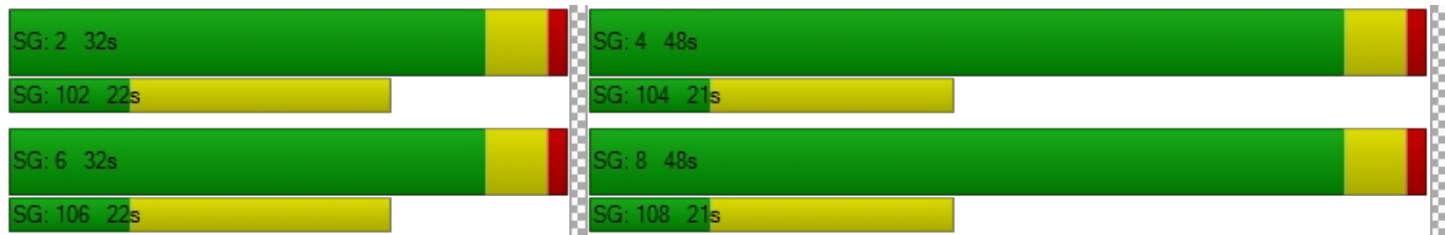
X, volume / capacity	0.55	0.78	0.17	0.10	0.46	0.08	0.05	0.32	0.03
d, Delay for Lane Group [s/veh]	22.21	35.75	18.54	14.14	12.60	8.86	16.36	10.89	8.49
Lane Group LOS	C	D	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	3.59	5.15	1.11	0.60	5.05	0.53	0.26	3.14	0.17
50th-Percentile Queue Length [ft]	89.77	128.78	27.69	15.08	126.37	13.17	6.59	78.41	4.19
95th-Percentile Queue Length [veh]	6.46	8.87	1.99	1.09	8.74	0.95	0.47	5.65	0.30
95th-Percentile Queue Length [ft]	161.58	221.84	49.84	27.14	218.54	23.70	11.86	141.13	7.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.21	22.21	22.21	35.75	35.75	18.54	14.14	12.60	8.86	16.36	10.89	8.49
Movement LOS	C	C	C	D	D	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	22.21			31.29			12.33			11.06		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.80											
Intersection LOS	B											
Intersection V/C	0.575											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	670	90	60	630	90	30	420	80	60	360	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	670	90	60	630	90	30	420	80	60	360	20
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	180	24	16	165	24	8	111	21	16	94	5
Total Analysis Volume [veh/h]	54	721	97	63	660	94	32	444	85	63	377	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.08	0.22	0.22	0.09	0.20	0.20	0.03	0.23	0.05	0.07	0.20	0.01
s, saturation flow rate [veh/h]	718	1900	1807	677	1900	1801	1011	1900	1552	954	1900	1546
c, Capacity [veh/h]	393	1058	1007	368	1058	1003	223	623	509	178	623	507
d1, Uniform Delay [s]	14.42	10.06	10.08	15.31	9.84	9.87	31.14	23.57	19.11	35.24	22.53	18.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	1.10	1.18	1.01	0.97	1.04	0.11	1.52	0.06	0.44	0.35	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.39	0.40	0.17	0.36	0.37	0.14	0.71	0.17	0.35	0.60	0.04
d, Delay for Lane Group [s/veh]	15.15	11.16	11.26	16.32	10.81	10.91	31.25	25.09	19.16	35.68	22.88	18.32
Lane Group LOS	B	B	B	B	B	B	C	C	B	D	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.66	4.04	3.91	0.81	3.64	3.51	0.55	7.25	1.09	1.19	5.73	0.26
50th-Percentile Queue Length [ft]	16.49	101.09	97.66	20.29	91.06	87.87	13.73	181.20	27.30	29.69	143.27	6.46
95th-Percentile Queue Length [veh]	1.19	7.28	7.03	1.46	6.56	6.33	0.99	11.66	1.97	2.14	9.66	0.47
95th-Percentile Queue Length [ft]	29.69	181.97	175.78	36.52	163.91	158.17	24.71	291.58	49.14	53.44	241.43	11.63



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.15	11.20	11.26	16.32	10.85	10.91	31.25	25.09	19.16	35.68	22.88	18.32
Movement LOS	B	B	B	B	B	B	C	C	B	D	C	B
d_A, Approach Delay [s/veh]	11.45			11.28			24.54			24.43		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.32											
Intersection LOS	B											
Intersection V/C	0.455											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	40	390	50	80	360	80	10	400	50	60	370	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	390	50	80	360	80	10	400	50	60	370	50
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	101	13	22	98	22	3	110	14	17	103	14
Total Analysis Volume [veh/h]	41	404	52	87	394	87	11	439	55	67	411	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	21	21	21	21	21	21
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.04	0.21	0.03	0.09	0.21	0.06	0.01	0.23	0.04	0.07	0.22	0.04
s, saturation flow rate [veh/h]	1002	1900	1566	995	1900	1544	981	1900	1515	953	1900	1551
c, Capacity [veh/h]	484	1079	889	478	1079	877	226	571	455	207	571	466
d1, Uniform Delay [s]	13.98	8.29	6.75	14.89	8.23	6.91	27.06	22.24	17.75	29.82	21.82	17.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.99	0.13	0.84	0.96	0.23	0.03	0.84	0.04	0.33	0.65	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.37	0.06	0.18	0.37	0.10	0.05	0.77	0.12	0.32	0.72	0.12
d, Delay for Lane Group [s/veh]	14.33	9.28	6.87	15.73	9.19	7.14	27.09	23.08	17.79	30.15	22.47	17.79
Lane Group LOS	B	A	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.43	3.01	0.32	0.97	2.92	0.54	0.16	6.24	0.62	1.06	5.71	0.63
50th-Percentile Queue Length [ft]	10.70	75.33	7.89	24.25	72.92	13.57	3.97	156.03	15.40	26.44	142.85	15.68
95th-Percentile Queue Length [veh]	0.77	5.42	0.57	1.75	5.25	0.98	0.29	10.34	1.11	1.90	9.63	1.13
95th-Percentile Queue Length [ft]	19.26	135.59	14.20	43.65	131.26	24.43	7.15	258.46	27.73	47.59	240.86	28.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.33	9.28	6.87	15.73	9.19	7.14	27.09	23.08	17.79	30.15	22.47	17.79
Movement LOS	B	A	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	9.45			9.88			22.59			22.94		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	16.14											
Intersection LOS	B											
Intersection V/C	0.444											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	60	430	60	210	670	70	20	320	140	110	420	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	430	60	210	670	70	20	320	140	110	420	40
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	114	16	55	177	18	6	96	42	30	114	11
Total Analysis Volume [veh/h]	64	457	64	221	707	74	24	385	168	120	457	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.09	0.14	0.14	0.25	0.21	0.21	0.03	0.20	0.11	0.12	0.24	0.03
s, saturation flow rate [veh/h]	702	1900	1807	892	1900	1825	944	1900	1513	998	1900	1553
c, Capacity [veh/h]	337	931	886	446	931	894	232	708	564	279	708	579
d1, Uniform Delay [s]	17.09	10.58	10.60	17.62	11.50	11.52	26.76	17.27	15.49	26.96	18.13	14.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	0.77	0.82	3.90	1.43	1.51	0.07	0.24	0.11	0.39	0.37	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.28	0.29	0.50	0.43	0.43	0.10	0.54	0.30	0.43	0.65	0.07
d, Delay for Lane Group [s/veh]	18.34	11.34	11.42	21.52	12.93	13.03	26.83	17.51	15.60	27.35	18.50	14.18
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.92	2.78	2.70	2.95	3.56	3.46	0.35	4.54	1.78	1.82	5.68	0.41
50th-Percentile Queue Length [ft]	23.01	69.51	67.43	73.80	88.93	86.56	8.67	113.58	44.41	45.50	141.89	10.37
95th-Percentile Queue Length [veh]	1.66	5.00	4.86	5.31	6.40	6.23	0.62	8.04	3.20	3.28	9.58	0.75
95th-Percentile Queue Length [ft]	41.42	125.12	121.38	132.83	160.07	155.81	15.61	200.98	79.95	81.90	239.56	18.67

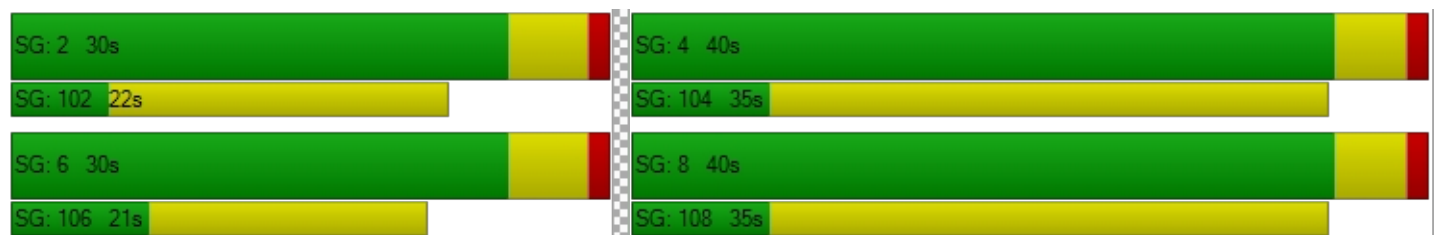


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.34	11.38	11.42	21.52	12.97	13.03	26.83	17.51	15.60	27.35	18.50	14.18
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.14			14.86			17.34			19.92		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.93											
Intersection LOS	B											
Intersection V/C	0.488											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.458

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	380	50	60	500	40	80	60	80	40	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	380	50	60	500	40	80	60	80	40	80	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	99	13	16	134	11	26	19	26	12	23	6
Total Analysis Volume [veh/h]	42	398	52	64	535	43	102	77	102	46	93	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	14	14	14	8	8
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.24	0.07	0.28	0.03	0.18	0.10
s, saturation flow rate [veh/h]	861	1839	931	1900	1485	1597	1703
c, Capacity [veh/h]	364	802	411	828	648	587	607
d1, Uniform Delay [s]	11.74	6.58	10.89	6.92	5.12	9.94	9.16
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.23	0.06	0.32	0.02	0.23	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

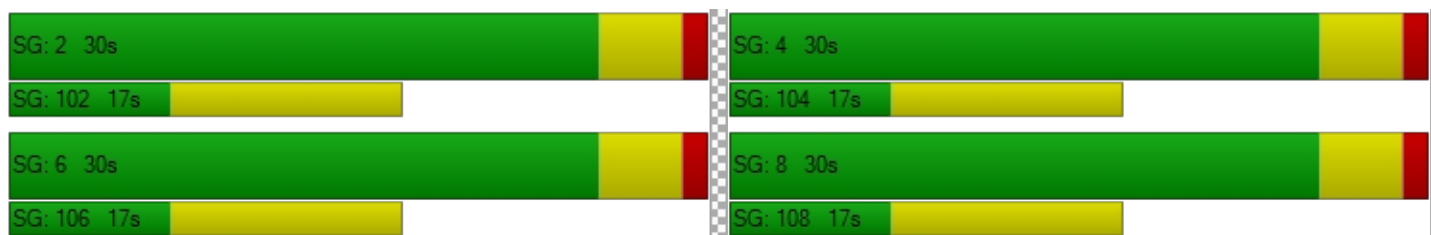
X, volume / capacity	0.12	0.56	0.16	0.65	0.07	0.48	0.27
d, Delay for Lane Group [s/veh]	11.79	6.81	10.96	7.24	5.13	10.16	9.24
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.24	0.29	1.55	0.09	1.11	0.59
50th-Percentile Queue Length [ft]	5.02	30.89	7.21	38.84	2.27	27.87	14.67
95th-Percentile Queue Length [veh]	0.36	2.22	0.52	2.80	0.16	2.01	1.06
95th-Percentile Queue Length [ft]	9.04	55.61	12.97	69.90	4.09	50.17	26.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.79	6.81	6.81	10.96	7.24	5.13	10.16	10.16	10.16	9.24	9.24	9.24
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.24			7.47			10.16			9.24		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.06											
Intersection LOS	A											
Intersection V/C	0.458											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	70	1100	60	90	1100	30	90	260	70	50	160	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1100	60	90	1100	30	90	260	70	50	160	30
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	296	16	24	297	8	23	68	18	13	42	8
Total Analysis Volume [veh/h]	75	1186	65	97	1190	32	93	270	73	52	167	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.16	0.33	0.33	0.22	0.32	0.32	0.08	0.19	0.05	0.11
s, saturation flow rate [veh/h]	463	1900	1857	451	1900	1874	1191	1815	1047	1839
c, Capacity [veh/h]	270	1136	1110	261	1136	1120	293	522	183	528
d1, Uniform Delay [s]	17.84	9.69	9.72	19.57	9.56	9.59	29.88	25.04	34.92	22.76
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.54	1.96	2.04	4.01	1.85	1.89	0.23	0.53	0.31	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.56	0.56	0.37	0.54	0.54	0.32	0.66	0.28	0.37
d, Delay for Lane Group [s/veh]	20.39	11.65	11.76	23.58	11.41	11.48	30.11	25.57	35.23	22.93
Lane Group LOS	C	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.13	6.10	6.04	1.66	6.25	6.23	1.57	5.47	0.95	2.85
50th-Percentile Queue Length [ft]	28.16	152.45	151.00	41.54	156.35	155.77	39.18	136.68	23.86	71.31
95th-Percentile Queue Length [veh]	2.03	10.15	10.07	2.99	10.36	10.32	2.82	9.30	1.72	5.13
95th-Percentile Queue Length [ft]	50.69	253.70	251.76	74.77	258.88	258.11	70.52	232.55	42.95	128.35

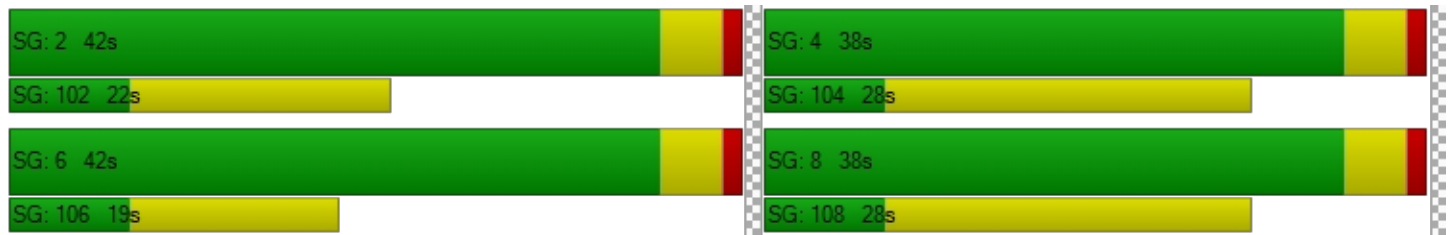


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.39	11.70	11.76	23.58	11.44	11.48	30.11	25.57	25.57	35.23	22.93	22.93
Movement LOS	C	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.19			12.34			26.54			25.49		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.13											
Intersection LOS	B											
Intersection V/C	0.523											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	250	120	40	170	70	80	290	40	20	210	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	250	120	40	170	70	80	290	40	20	210	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	79	38	12	52	22	22	78	11	6	60	3
Total Analysis Volume [veh/h]	13	315	151	49	210	86	86	312	43	23	242	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	47	47	47	47
g / C, Green / Cycle	0.29	0.29	0.29	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.27	0.21	0.06	0.35	0.03	0.17	0.01
s, saturation flow rate [veh/h]	1770	1231	1551	1123	1538	1541	1558
c, Capacity [veh/h]	564	414	453	720	911	962	923
d1, Uniform Delay [s]	27.34	23.26	21.14	12.03	6.82	8.13	6.68
k, delay calibration	0.28	0.15	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.94	2.23	0.20	3.04	0.10	0.71	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

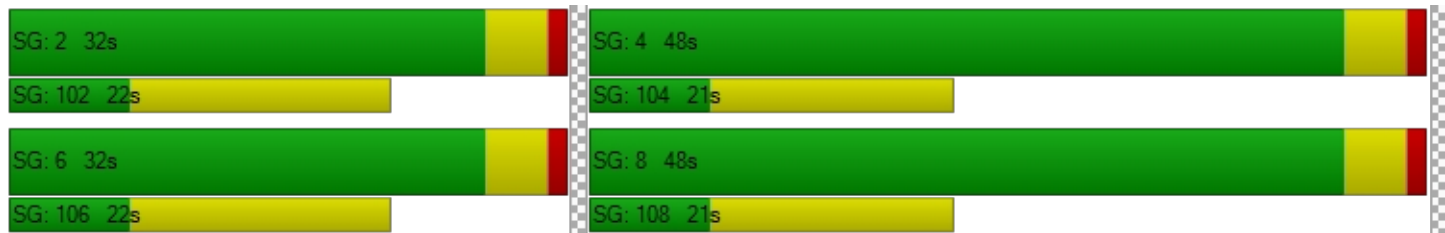
X, volume / capacity	0.85	0.63	0.19	0.55	0.05	0.28	0.01
d, Delay for Lane Group [s/veh]	36.28	25.49	21.34	15.08	6.92	8.84	6.71
Lane Group LOS	D	C	C	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.65	4.03	1.17	3.60	0.29	2.02	0.08
50th-Percentile Queue Length [ft]	241.17	100.65	29.25	90.09	7.20	50.54	1.96
95th-Percentile Queue Length [veh]	14.74	7.25	2.11	6.49	0.52	3.64	0.14
95th-Percentile Queue Length [ft]	368.52	181.17	52.65	162.17	12.96	90.97	3.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.28	36.28	36.28	25.49	25.49	21.34	15.08	15.08	6.92	8.84	8.84	6.71
Movement LOS	D	D	D	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	36.28			24.45			14.28			8.75		
Approach LOS	D			C			B			A		
d_I, Intersection Delay [s/veh]	22.40											
Intersection LOS	C											
Intersection V/C	0.625											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	50	900	100	40	830	60	20	300	60	100	260	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	900	100	40	830	60	20	300	60	100	260	60
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	234	26	11	220	16	6	83	17	27	70	16
Total Analysis Volume [veh/h]	52	935	104	42	881	64	22	331	66	108	282	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.09	0.28	0.28	0.08	0.25	0.25	0.02	0.22	0.11	0.19
s, saturation flow rate [veh/h]	602	1900	1817	551	1900	1847	1040	1836	1000	1822
c, Capacity [veh/h]	311	1027	982	279	1027	998	255	633	222	628
d1, Uniform Delay [s]	17.52	11.70	11.75	18.64	11.29	11.31	28.92	21.91	33.81	21.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.07	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	1.85	1.97	1.14	1.52	1.58	0.05	0.65	0.62	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.51	0.52	0.15	0.47	0.47	0.09	0.63	0.49	0.55
d, Delay for Lane Group [s/veh]	18.68	13.55	13.72	19.78	12.81	12.88	28.98	22.56	34.43	21.49
Lane Group LOS	B	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.74	5.90	5.74	0.62	5.12	5.02	0.35	5.91	2.00	4.95
50th-Percentile Queue Length [ft]	18.41	147.42	143.58	15.51	127.99	125.48	8.85	147.76	49.92	123.85
95th-Percentile Queue Length [veh]	1.33	9.88	9.67	1.12	8.83	8.69	0.64	9.90	3.59	8.60
95th-Percentile Queue Length [ft]	33.14	246.98	241.84	27.91	220.75	217.33	15.93	247.43	89.85	215.10



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.68	13.62	13.72	19.78	12.84	12.88	28.98	22.56	22.56	34.43	21.49	21.49
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.87			13.14			22.90			24.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.56											
Intersection LOS	B											
Intersection V/C	0.497											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	30	510	50	50	460	40	40	320	20	110	260	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	510	50	50	460	40	40	320	20	110	260	50
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	129	13	14	124	11	12	93	6	30	72	14
Total Analysis Volume [veh/h]	30	517	51	54	497	43	46	370	23	121	287	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	36	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.27	0.03	0.06	0.26	0.03	0.04	0.21	0.12	0.19
s, saturation flow rate [veh/h]	912	1900	1552	894	1900	1569	1031	1871	998	1806
c, Capacity [veh/h]	391	968	791	377	968	799	281	672	254	649
d1, Uniform Delay [s]	16.91	11.58	8.72	17.89	11.42	8.67	25.07	18.18	28.65	17.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	2.11	0.16	0.80	1.95	0.13	0.10	0.30	0.51	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.53	0.06	0.14	0.51	0.05	0.16	0.58	0.48	0.53
d, Delay for Lane Group [s/veh]	17.30	13.69	8.87	18.69	13.36	8.79	25.17	18.49	29.16	17.97
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.36	5.13	0.37	0.68	4.85	0.31	0.63	4.71	1.88	3.99
50th-Percentile Queue Length [ft]	8.93	128.24	9.33	16.96	121.15	7.81	15.82	117.76	47.00	99.79
95th-Percentile Queue Length [veh]	0.64	8.84	0.67	1.22	8.46	0.56	1.14	8.27	3.38	7.19
95th-Percentile Queue Length [ft]	16.07	221.10	16.79	30.53	211.41	14.06	28.48	206.75	84.59	179.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.30	13.69	8.87	18.69	13.36	8.79	25.17	18.49	18.49	29.16	17.97	17.97
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.46			13.52			19.19			20.89		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.32											
Intersection LOS	B											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	530	110	60	490	170	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	530	110	60	490	170	110
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	147	31	16	128	50	33
Total Analysis Volume [veh/h]	588	122	63	512	202	131
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.08	0.08	0.27	0.11	0.08
s, saturation flow rate [veh/h]	1900	1545	831	1900	1810	1549
c, Capacity [veh/h]	852	693	378	852	418	358
d1, Uniform Delay [s]	6.32	4.74	11.14	5.97	9.56	9.27
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.04	0.08	0.25	0.32	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.69	0.18	0.17	0.60	0.48	0.37
d, Delay for Lane Group [s/veh]	6.69	4.78	11.21	6.23	9.88	9.51
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.36	0.21	0.27	1.11	0.83	0.52
50th-Percentile Queue Length [ft]	34.06	5.17	6.76	27.71	20.77	13.06
95th-Percentile Queue Length [veh]	2.45	0.37	0.49	2.00	1.50	0.94
95th-Percentile Queue Length [ft]	61.31	9.30	12.18	49.88	37.38	23.51

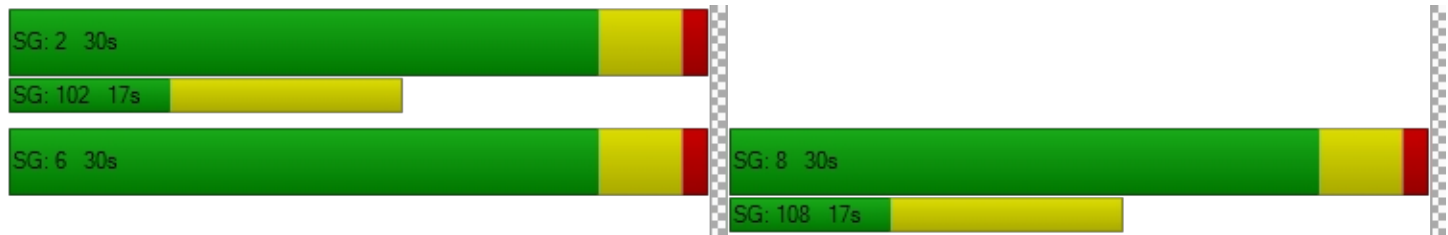


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.69	4.78	11.21	6.23	9.88	9.51
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	6.37		6.77		9.73	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.20					
Intersection LOS	A					
Intersection V/C	0.421					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1130	60	100	1060	60	130	340	120	80	270	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1130	60	100	1060	60	130	340	120	80	270	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	302	16	28	292	17	35	92	33	26	89	13
Total Analysis Volume [veh/h]	32	1208	64	110	1169	66	141	369	130	105	354	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	30	30	30	30	30
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.33	0.04	0.23	0.33	0.33	0.14	0.19	0.08	0.10	0.22
s, saturation flow rate [veh/h]	458	3618	1523	470	1900	1849	984	1900	1548	1018	1845
c, Capacity [veh/h]	199	1842	775	201	967	941	263	714	582	296	694
d1, Uniform Delay [s]	24.95	14.47	10.06	30.54	14.33	14.41	31.67	19.34	17.01	28.37	19.99
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.72	1.84	0.21	10.37	3.29	3.48	1.69	0.58	0.19	0.72	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

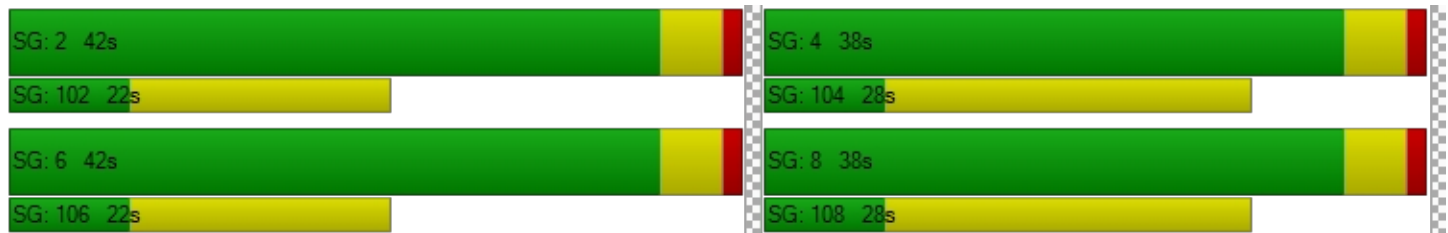
X, volume / capacity	0.16	0.66	0.08	0.55	0.64	0.65	0.54	0.52	0.22	0.35	0.59
d, Delay for Lane Group [s/veh]	26.68	16.31	10.27	40.90	17.62	17.90	33.36	19.92	17.20	29.09	20.78
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.59	7.93	0.59	2.57	8.08	8.03	2.67	5.16	1.59	1.83	6.02
50th-Percentile Queue Length [ft]	14.63	198.17	14.86	64.18	201.93	200.70	66.64	128.95	39.85	45.66	150.52
95th-Percentile Queue Length [veh]	1.05	12.54	1.07	4.62	12.74	12.67	4.80	8.88	2.87	3.29	10.05
95th-Percentile Queue Length [ft]	26.34	313.60	26.74	115.53	318.46	316.87	119.95	222.07	71.72	82.18	251.13

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.68	16.31	10.27	40.90	17.75	17.90	33.36	19.92	17.20	29.09	20.78	20.78
Movement LOS	C	B	B	D	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.27			19.65			22.33			22.49		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.32											
Intersection LOS	B											
Intersection V/C	0.554											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	260	40	160	180	20	60	560	120	20	430	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	260	40	160	180	20	60	560	120	20	430	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	79	12	49	55	6	16	147	31	5	117	8
Total Analysis Volume [veh/h]	24	316	49	197	221	25	63	587	126	22	467	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	50	50	50	50	50	50	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	38	38	38	38	38
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.47	0.47	0.47	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.33	0.37	0.04	0.07	0.19	0.20	0.03	0.27
s, saturation flow rate [veh/h]	1178	1844	600	600	600	906	1900	1741	745	1868
c, Capacity [veh/h]	155	766	240	249	249	313	893	818	320	877
d1, Uniform Delay [s]	36.44	17.05	20.37	21.66	14.27	24.43	13.94	14.03	19.67	15.35
k, delay calibration	0.11	0.11	0.15	0.20	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.46	8.97	16.83	0.17	1.44	1.40	1.60	0.41	2.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.48	0.82	0.89	0.10	0.20	0.41	0.42	0.07	0.57
d, Delay for Lane Group [s/veh]	36.90	17.52	29.34	38.49	14.45	25.87	15.34	15.63	20.08	18.03
Lane Group LOS	D	B	C	D	B	C	B	B	C	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	4.60	3.50	4.63	0.27	1.06	4.39	4.20	0.32	6.72
50th-Percentile Queue Length [ft]	11.45	115.02	87.51	115.66	6.75	26.59	109.82	104.99	7.98	168.05
95th-Percentile Queue Length [veh]	0.82	8.12	6.30	8.15	0.49	1.91	7.83	7.56	0.57	10.97
95th-Percentile Queue Length [ft]	20.61	202.97	157.51	203.84	12.16	47.87	195.75	188.99	14.37	274.35

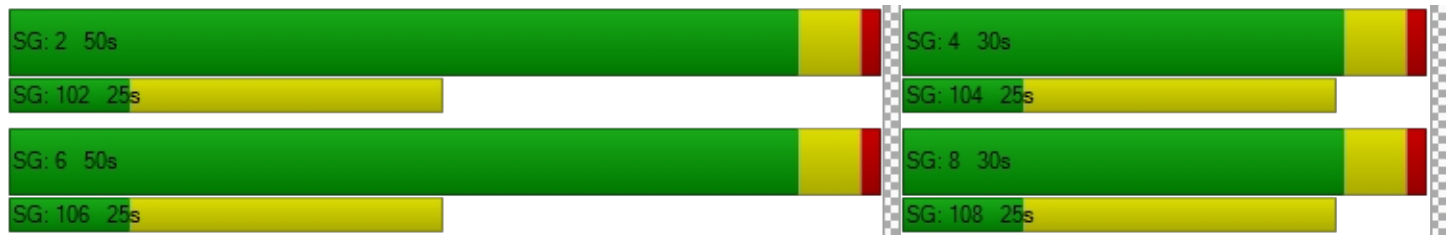


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.90	17.52	17.52	29.34	38.49	14.45	25.87	15.45	15.63	20.08	18.03	18.03
Movement LOS	D	B	B	C	D	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.71			33.06			16.33			18.12		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	20.68											
Intersection LOS	C											
Intersection V/C	0.636											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	680	290	170	940	30	30	430	100	90	380	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	680	290	170	940	30	30	430	100	90	380	10
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	186	79	44	242	8	8	114	26	27	114	3
Total Analysis Volume [veh/h]	99	745	318	175	969	31	32	455	106	108	458	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	75	63	63	75	64	64	36	24	24	36	28	28
g / C, Green / Cycle	0.62	0.53	0.53	0.62	0.54	0.54	0.30	0.20	0.20	0.30	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.14	0.29	0.30	0.25	0.26	0.27	0.03	0.15	0.16	0.10	0.12	0.13
s, saturation flow rate [veh/h]	708	1900	1660	702	1900	1874	984	1900	1700	1118	1900	1871
c, Capacity [veh/h]	430	999	872	411	1021	1006	343	386	346	298	446	439
d1, Uniform Delay [s]	11.29	19.11	19.39	13.62	17.47	17.49	30.62	44.87	45.33	32.68	40.08	40.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	2.26	2.79	3.22	1.70	1.73	0.04	1.09	1.54	0.28	0.36	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

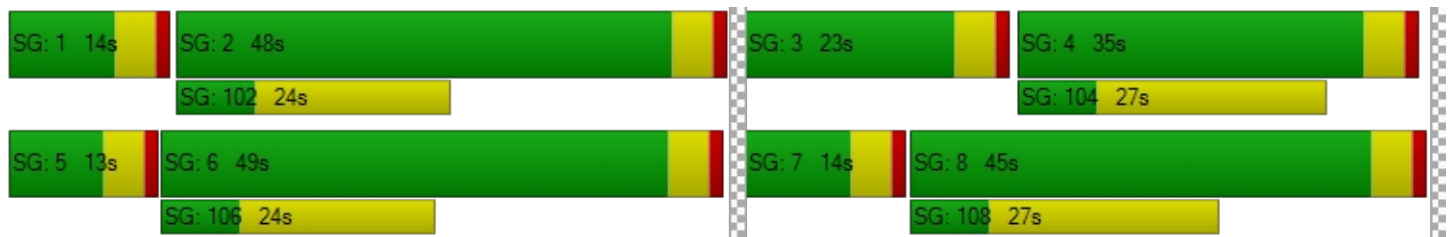
X, volume / capacity	0.23	0.56	0.58	0.43	0.49	0.49	0.09	0.75	0.79	0.36	0.53	0.53
d, Delay for Lane Group [s/veh]	12.54	21.37	22.18	16.84	19.17	19.22	30.66	45.97	46.86	32.95	40.44	40.50
Lane Group LOS	B	C	C	B	B	B	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.17	10.84	10.03	2.25	9.04	8.97	0.67	8.16	7.83	2.37	6.13	6.09
50th-Percentile Queue Length [ft]	29.14	270.93	250.80	56.18	226.03	224.15	16.72	204.09	195.71	59.15	153.30	152.35
95th-Percentile Queue Length [veh]	2.10	16.24	15.23	4.05	13.97	13.88	1.20	12.85	12.42	4.26	10.19	10.14
95th-Percentile Queue Length [ft]	52.45	405.91	380.66	101.13	349.31	346.91	30.09	321.24	310.43	106.47	254.82	253.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.54	21.58	22.18	16.84	19.19	19.22	30.66	46.29	46.86	32.95	40.47	40.50
Movement LOS	B	C	C	B	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	20.97			18.84			45.55			39.07		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	27.40											
Intersection LOS	C											
Intersection V/C	0.555											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	40	380	160	260	440	60	110	460	110	40	610	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	380	160	260	440	60	110	460	110	40	610	20
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	105	44	71	120	16	28	117	28	13	191	6
Total Analysis Volume [veh/h]	44	421	177	283	479	65	112	467	112	50	763	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.05	0.22	0.11	0.29	0.25	0.04	0.16	0.16	0.16	0.06	0.21	0.21
s, saturation flow rate [veh/h]	929	1900	1567	977	1900	1580	694	1900	1742	842	1900	1870
c, Capacity [veh/h]	361	922	761	401	922	767	239	728	668	306	728	717
d1, Uniform Delay [s]	19.17	11.91	10.45	23.80	12.40	9.67	26.95	15.79	15.86	21.43	16.82	16.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	1.63	0.72	10.03	2.09	0.22	0.53	0.14	0.16	0.09	0.24	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.46	0.23	0.71	0.52	0.08	0.47	0.41	0.42	0.16	0.54	0.55
d, Delay for Lane Group [s/veh]	19.87	13.54	11.17	33.84	14.49	9.89	27.48	15.93	16.02	21.52	17.05	17.08
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.57	4.14	1.53	5.26	4.95	0.51	1.74	3.26	3.08	0.64	4.61	4.57
50th-Percentile Queue Length [ft]	14.35	103.59	38.15	131.47	123.70	12.83	43.45	81.42	76.90	15.99	115.26	114.17
95th-Percentile Queue Length [veh]	1.03	7.46	2.75	9.02	8.60	0.92	3.13	5.86	5.54	1.15	8.13	8.07
95th-Percentile Queue Length [ft]	25.83	186.46	68.67	225.49	214.90	23.10	78.21	146.55	138.42	28.77	203.29	201.79

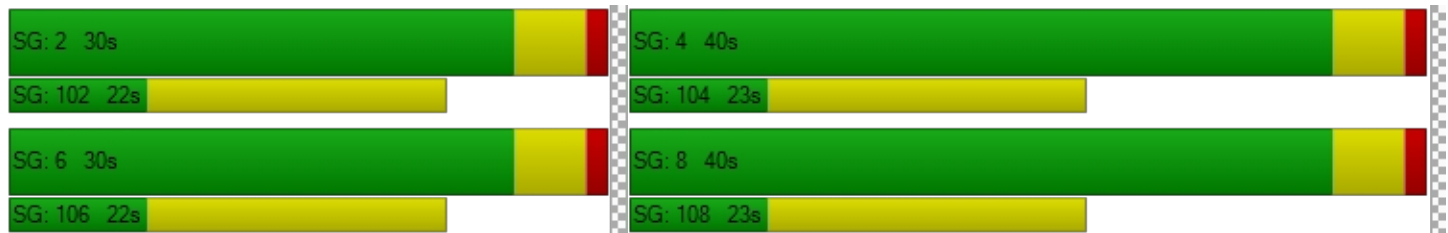


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.87	13.54	11.17	33.84	14.49	9.89	27.48	15.96	16.02	21.52	17.07	17.08
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.32			20.75			17.84			17.33		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	17.53											
Intersection LOS	B											
Intersection V/C	0.499											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.514

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	30	320	60	220	430	270	10	430	30	210	720	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	320	60	220	430	270	10	430	30	210	720	190
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	96	18	62	122	77	3	112	8	55	190	50
Total Analysis Volume [veh/h]	36	384	72	250	488	306	10	447	31	222	760	201
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.05	0.11	0.05	0.25	0.22	0.23	0.02	0.12	0.02	0.24	0.26	0.27
s, saturation flow rate [veh/h]	691	3618	1572	1008	1900	1599	593	3618	1536	943	1900	1741
c, Capacity [veh/h]	313	1744	758	503	916	771	179	1398	594	354	734	673
d1, Uniform Delay [s]	17.86	10.50	9.84	16.91	12.08	12.22	27.06	15.03	13.45	24.67	17.85	17.95
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.09	0.10
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.74	0.29	0.25	3.47	1.68	2.14	0.05	0.05	0.01	0.69	0.93	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.22	0.09	0.50	0.46	0.48	0.06	0.32	0.05	0.63	0.68	0.69
d, Delay for Lane Group [s/veh]	18.60	10.79	10.09	20.38	13.76	14.35	27.11	15.08	13.46	25.35	18.78	19.12
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.48	1.67	0.61	3.43	4.36	3.93	0.15	2.31	0.29	3.37	6.27	5.92
50th-Percentile Queue Length [ft]	11.95	41.68	15.33	85.75	108.99	98.23	3.63	57.77	7.19	84.20	156.75	148.00
95th-Percentile Queue Length [veh]	0.86	3.00	1.10	6.17	7.78	7.07	0.26	4.16	0.52	6.06	10.38	9.91
95th-Percentile Queue Length [ft]	21.52	75.02	27.60	154.35	194.59	176.82	6.54	103.98	12.95	151.57	259.42	247.76

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.60	10.79	10.09	20.38	13.84	14.35	27.11	15.08	13.46	25.35	18.90	19.12
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.26			15.56			15.22			20.15		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.54											
Intersection LOS	B											
Intersection V/C	0.514											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	60	590	60	440	880	60	100	320	340	160	830	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	590	60	440	880	60	100	320	340	160	830	80
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	164	17	116	231	16	27	85	90	50	257	25
Total Analysis Volume [veh/h]	67	657	67	463	925	63	106	340	361	198	1028	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	60	43	43	61	49	49	50	35	35	50	39	39
g / C, Green / Cycle	0.50	0.36	0.36	0.51	0.41	0.41	0.42	0.29	0.29	0.42	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.09	0.19	0.20	0.26	0.26	0.27	0.14	0.18	0.24	0.19	0.30	0.30
s, saturation flow rate [veh/h]	769	1900	1826	1755	1900	1847	753	1900	1523	1039	1900	1833
c, Capacity [veh/h]	350	685	658	888	782	760	256	550	441	356	612	591
d1, Uniform Delay [s]	18.67	30.43	30.49	19.91	28.18	28.29	27.93	36.92	39.73	26.87	39.43	39.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.46	0.04	0.16	0.04	0.25	0.26
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	3.00	3.18	2.19	3.95	4.18	4.54	0.43	5.40	0.51	14.04	15.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.54	0.54	0.52	0.64	0.64	0.41	0.62	0.82	0.56	0.93	0.94
d, Delay for Lane Group [s/veh]	19.88	33.43	33.66	22.10	32.13	32.47	32.47	37.35	45.13	27.38	53.47	55.34
Lane Group LOS	B	C	C	C	C	C	C	D	D	C	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.16	9.58	9.33	9.93	13.05	12.92	2.18	8.68	10.50	3.73	18.49	18.32
50th-Percentile Queue Length [ft]	29.10	239.53	233.22	248.15	326.34	323.00	54.62	217.02	262.62	93.20	462.17	457.89
95th-Percentile Queue Length [veh]	2.10	14.66	14.34	15.09	18.98	18.81	3.93	13.51	15.82	6.71	25.54	25.33
95th-Percentile Queue Length [ft]	52.39	366.44	358.45	377.32	474.47	470.37	98.32	337.82	395.51	167.77	638.45	633.36



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.88	33.53	33.66	22.10	32.29	32.47	32.47	37.35	45.13	27.38	54.30	55.34
Movement LOS	B	C	C	C	C	C	C	D	D	C	D	E
d_A, Approach Delay [s/veh]	32.38			29.05			40.19			50.36		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	38.16											
Intersection LOS	D											
Intersection V/C	0.701											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.422

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	⇐⇐		⇑⇑		⇑⇑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	320	260	0	490	790	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	320	260	0	490	790	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	86	70	0	133	217	0
Total Analysis Volume [veh/h]	343	279	0	534	869	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	62	62
g / C, Green / Cycle	0.20	0.20	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.15	0.24
s, saturation flow rate [veh/h]	1810	1625	3618	3618
c, Capacity [veh/h]	369	331	2510	2510
d1, Uniform Delay [s]	34.74	34.80	4.94	5.54
k, delay calibration	0.11	0.12	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.47	8.92	0.19	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

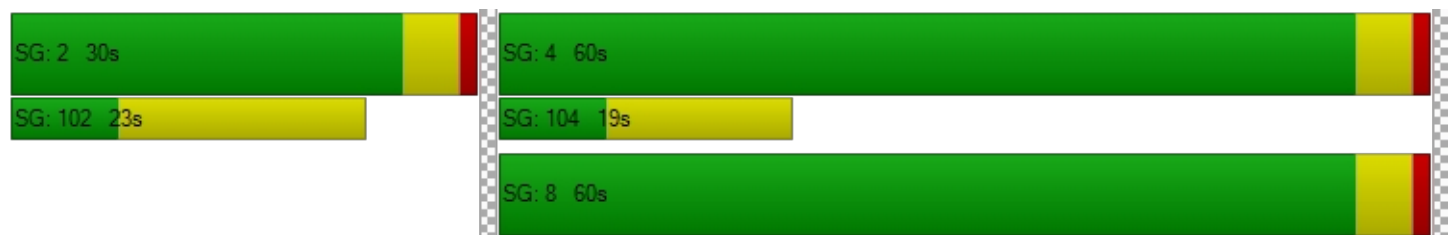
X, volume / capacity	0.89	0.89	0.21	0.35
d, Delay for Lane Group [s/veh]	42.21	43.73	5.13	5.92
Lane Group LOS	D	D	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	7.08	6.54	1.56	2.86
50th-Percentile Queue Length [ft]	177.03	163.62	39.04	71.50
95th-Percentile Queue Length [veh]	11.45	10.74	2.81	5.15
95th-Percentile Queue Length [ft]	286.13	268.51	70.27	128.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.34	43.73	0.00	5.13	5.92	0.00
Movement LOS	D	D		A	A	
d_A, Approach Delay [s/veh]	42.93		5.13		5.92	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	17.08					
Intersection LOS	B					
Intersection V/C	0.422					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			TTL			TL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	100	80	10	30	30	20	440	20	18	1170	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	100	80	10	30	30	20	440	20	18	1170	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	34	27	3	10	10	6	123	6	5	319	19
Total Analysis Volume [veh/h]	54	135	108	14	41	41	22	492	22	18	1277	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	63	63	63	63	63
g / C, Green / Cycle	0.20	0.20	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.17	0.06	0.05	0.14	0.14	0.36	0.36
s, saturation flow rate [veh/h]	1700	1609	409	1900	1871	1900	1856
c, Capacity [veh/h]	387	367	283	1326	1306	1326	1296
d1, Uniform Delay [s]	34.68	30.45	12.04	4.74	4.74	6.36	6.44
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	0.14	0.53	0.33	0.33	1.40	1.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.77	0.26	0.08	0.19	0.20	0.51	0.52
d, Delay for Lane Group [s/veh]	35.90	30.59	12.57	5.07	5.07	7.76	7.95
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.19	1.73	0.27	1.51	1.50	5.41	5.50
50th-Percentile Queue Length [ft]	154.69	43.22	6.68	37.87	37.48	135.24	137.51
95th-Percentile Queue Length [veh]	10.27	3.11	0.48	2.73	2.70	9.22	9.35
95th-Percentile Queue Length [ft]	256.68	77.79	12.03	68.16	67.47	230.61	233.66

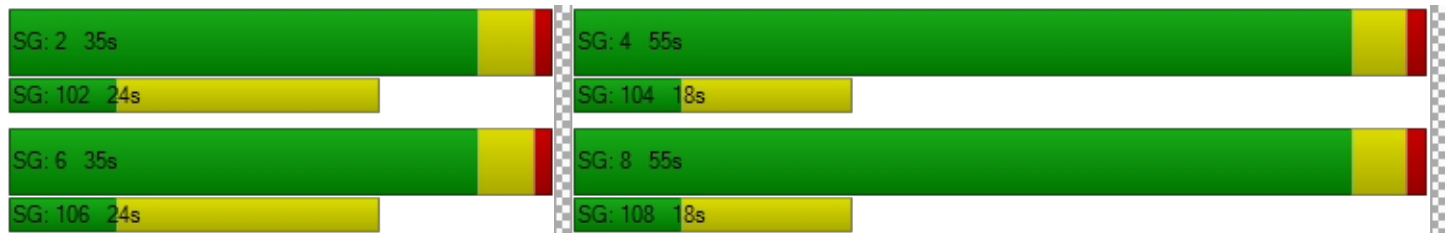


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.90	35.90	35.90	30.59	30.59	30.59	12.57	5.07	5.07	0.00	7.85	7.95
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.90			30.59			5.38			7.85		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	11.88											
Intersection LOS	B											
Intersection V/C	0.539											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	58.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	940	90	80	690	250	10	180	50	440	550	200
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	940	90	80	690	250	10	180	50	440	550	200
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	250	24	20	174	63	3	50	14	122	152	55
Total Analysis Volume [veh/h]	43	999	96	81	697	253	11	201	56	487	609	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	25	25	33	24	24	25	25	25	48	48	57
g / C, Green / Cycle	0.37	0.27	0.27	0.37	0.26	0.26	0.28	0.28	0.28	0.53	0.53	0.63
(v / s)_j Volume / Saturation Flow Rate	0.05	0.29	0.31	0.10	0.26	0.29	0.01	0.07	0.08	0.34	0.32	0.14
s, saturation flow rate [veh/h]	873	1900	1760	781	1900	1565	818	1900	1681	1428	1900	1554
c, Capacity [veh/h]	286	520	482	267	503	414	110	529	468	809	1002	984
d1, Uniform Delay [s]	21.63	32.69	32.69	22.45	32.97	33.10	42.37	25.18	25.35	14.01	14.80	7.06
k, delay calibration	0.50	0.50	0.50	0.07	0.50	0.50	0.04	0.04	0.04	0.11	0.08	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	58.79	77.50	0.40	37.42	71.61	0.15	0.09	0.11	0.76	0.45	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

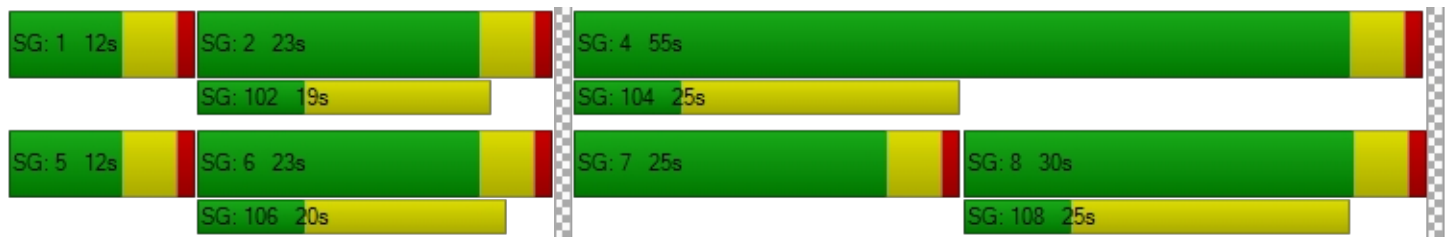
X, volume / capacity	0.15	1.07	1.12	0.30	0.99	1.09	0.10	0.25	0.27	0.60	0.61	0.22
d, Delay for Lane Group [s/veh]	22.74	91.48	110.18	22.85	70.38	104.71	42.52	25.27	25.46	14.76	15.25	7.11
Lane Group LOS	C	F	F	C	E	F	D	C	C	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.65	19.29	20.38	1.10	15.52	16.85	0.24	2.11	2.05	6.12	8.12	1.63
50th-Percentile Queue Length [ft]	16.13	482.16	509.39	27.54	388.08	421.35	5.96	52.80	51.29	152.92	203.11	40.73
95th-Percentile Queue Length [veh]	1.16	27.57	29.67	1.98	21.98	24.83	0.43	3.80	3.69	10.17	12.80	2.93
95th-Percentile Queue Length [ft]	29.03	689.16	741.76	49.56	549.62	620.75	10.73	95.03	92.33	254.32	319.97	73.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.74	99.78	110.18	22.85	80.22	104.71	42.52	25.34	25.46	14.76	15.25	7.11
Movement LOS	C	F	F	C	F	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	97.74			81.72			26.07			13.70		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	58.74											
Intersection LOS	E											
Intersection V/C	0.658											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1250	50	30	1140	50	60	110	40	60	60	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1250	50	30	1140	50	60	110	40	60	60	50
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	324	13	8	297	13	18	34	12	19	19	16
Total Analysis Volume [veh/h]	62	1294	52	31	1187	52	73	134	49	75	75	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.14	0.36	0.36	0.08	0.33	0.33	0.17	0.16
s, saturation flow rate [veh/h]	456	1900	1863	412	1900	1861	1484	1304
c, Capacity [veh/h]	302	1248	1224	272	1248	1223	397	358
d1, Uniform Delay [s]	13.26	7.32	7.35	13.46	7.01	7.04	28.47	27.83
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.53	1.69	1.76	0.85	1.43	1.48	0.66	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.54	0.55	0.11	0.50	0.50	0.65	0.59
d, Delay for Lane Group [s/veh]	14.80	9.01	9.11	14.31	8.44	8.52	29.13	28.41
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.76	5.34	5.33	0.38	4.70	4.66	4.41	3.58
50th-Percentile Queue Length [ft]	18.99	133.61	133.16	9.40	117.46	116.59	110.15	89.45
95th-Percentile Queue Length [veh]	1.37	9.14	9.11	0.68	8.25	8.21	7.85	6.44
95th-Percentile Queue Length [ft]	34.19	228.39	227.79	16.91	206.33	205.13	196.21	161.01

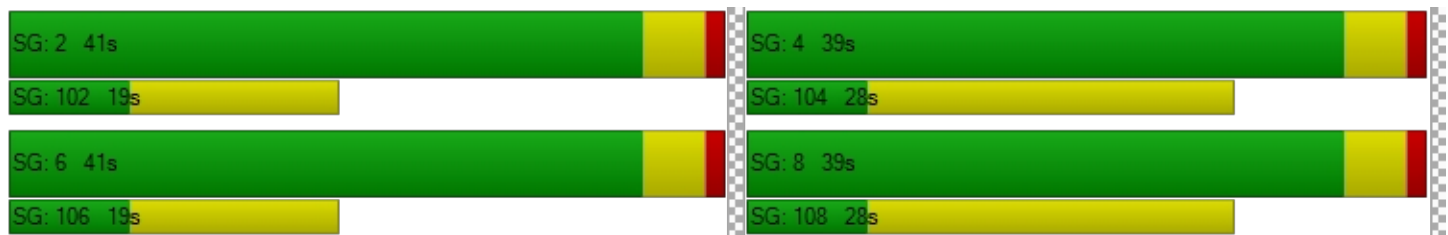


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.80	9.06	9.11	14.31	8.48	8.52	29.13	29.13	29.13	28.41	28.41	28.41
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.31			8.62			29.13			28.41		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.93											
Intersection LOS	B											
Intersection V/C	0.532											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	30	1250	70	20	1250	180	20	80	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	30	1250	70	20	1250	180	20	80	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	8	322	18	5	329	47	6	26	12
Total Analysis Volume [veh/h]	0	0	0	31	1287	72	21	1315	189	23	104	47
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		100	100	100	100	100	100	11	11
g / C, Green / Cycle		0.84	0.84	0.84	0.84	0.84	0.84	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate		0.09	0.36	0.36	0.05	0.40	0.41	0.07	0.03
s, saturation flow rate [veh/h]		354	1900	1858	407	1900	1806	1776	1449
c, Capacity [veh/h]		307	1588	1553	352	1588	1509	156	127
d1, Uniform Delay [s]		6.00	2.53	2.54	5.01	2.71	2.74	53.70	51.53
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.66	0.86	0.89	0.32	1.05	1.14	3.94	0.67
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.10	0.43	0.43	0.06	0.48	0.49	0.82	0.37
d, Delay for Lane Group [s/veh]		6.66	3.39	3.43	5.33	3.75	3.89	57.64	52.20
Lane Group LOS		A	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.30	3.15	3.13	0.18	4.06	4.02	3.90	1.35
50th-Percentile Queue Length [ft]		7.50	78.84	78.18	4.51	101.45	100.49	97.51	33.71
95th-Percentile Queue Length [veh]		0.54	5.68	5.63	0.32	7.30	7.23	7.02	2.43
95th-Percentile Queue Length [ft]		13.51	141.92	140.72	8.12	182.61	180.87	175.52	60.67

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	6.66	3.41	3.43	5.33	3.81	3.89	57.64	57.64	52.20
Movement LOS				A	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			3.48			3.84			56.17		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	6.62											
Intersection LOS	A											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌			⇌⇌			⇌⇌			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1100	190	120	1050	20	130	10	130	20	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1100	190	120	1050	20	130	10	130	20	10	10
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	280	48	31	273	5	37	3	37	7	4	4
Total Analysis Volume [veh/h]	10	1122	194	125	1091	21	147	11	147	30	15	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	87	87	87	13	13	6
g / C, Green / Cycle	0.63	0.63	0.72	0.72	0.72	0.11	0.11	0.05
(v / s)_j Volume / Saturation Flow Rate	0.38	0.39	0.22	0.29	0.29	0.09	0.09	0.03
s, saturation flow rate [veh/h]	1874	1605	576	1900	1886	1816	1548	1777
c, Capacity [veh/h]	1203	1004	403	1371	1361	204	174	90
d1, Uniform Delay [s]	13.37	13.70	10.05	6.57	6.57	51.74	52.19	55.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.10	2.85	2.00	0.90	0.91	2.36	4.24	3.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.59	0.62	0.31	0.41	0.41	0.77	0.84	0.67
d, Delay for Lane Group [s/veh]	15.47	16.55	12.04	7.47	7.48	54.10	56.44	59.06
Lane Group LOS	B	B	B	A	A	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	11.20	10.25	1.05	5.20	5.18	4.79	4.58	1.85
50th-Percentile Queue Length [ft]	280.06	256.31	26.26	130.05	129.38	119.81	114.43	46.25
95th-Percentile Queue Length [veh]	16.69	15.50	1.89	8.94	8.91	8.38	8.09	3.33
95th-Percentile Queue Length [ft]	417.29	387.59	47.26	223.57	222.66	209.56	202.15	83.24

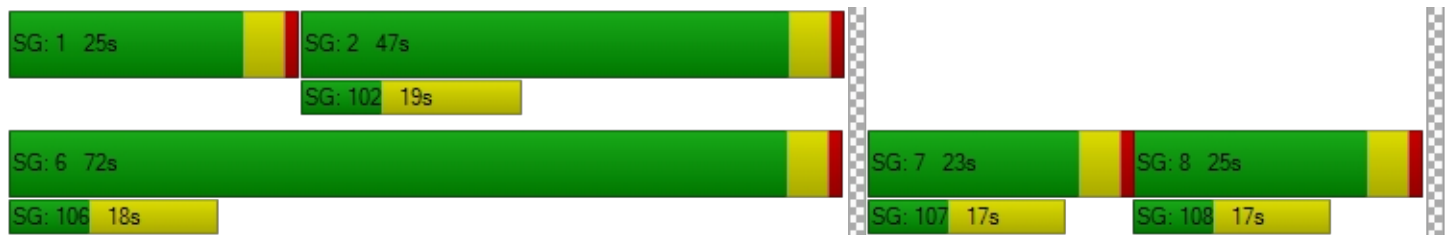


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.47	15.88	16.55	12.04	7.47	7.48	54.10	54.10	56.44	59.06	59.06	59.06
Movement LOS	B	B	B	B	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	15.97			7.94			55.23			59.06		
Approach LOS	B			A			E			E		
d_I, Intersection Delay [s/veh]	17.55											
Intersection LOS	B											
Intersection V/C	0.540											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	530	80	190	660	10	120	300	70	40	270	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	530	80	190	660	10	120	300	70	40	270	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	147	22	51	178	3	34	84	20	12	78	3
Total Analysis Volume [veh/h]	0	589	89	204	710	11	135	338	79	46	312	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	53	53	28	28	28	28	28
g / C, Green / Cycle	0.46	0.59	0.59	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.37	0.21	0.38	0.12	0.23	0.05	0.16	0.01
s, saturation flow rate [veh/h]	1844	962	1894	1082	1831	985	1900	1551
c, Capacity [veh/h]	845	445	1112	239	568	157	590	481
d1, Uniform Delay [s]	20.88	14.52	12.37	37.43	27.70	40.09	25.59	21.56
k, delay calibration	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.94	3.37	2.93	0.79	2.59	0.38	0.27	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

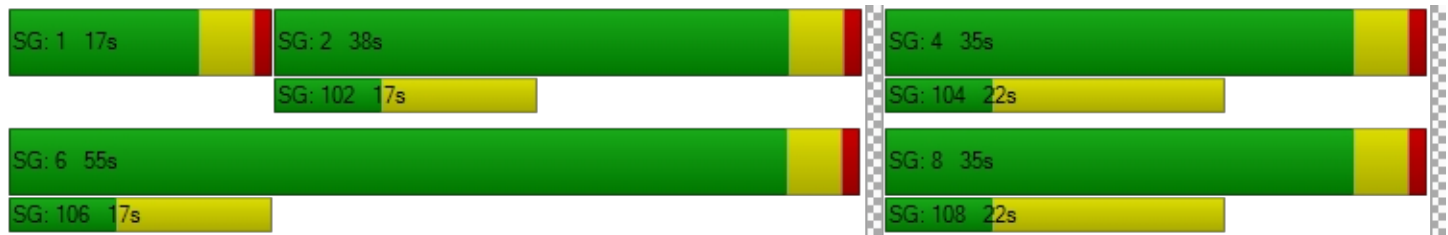
X, volume / capacity	0.80	0.46	0.65	0.57	0.73	0.29	0.53	0.02
d, Delay for Lane Group [s/veh]	28.83	17.90	15.29	38.22	30.28	40.47	25.87	21.57
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	13.04	2.02	9.03	2.90	8.16	1.00	5.49	0.18
50th-Percentile Queue Length [ft]	326.04	50.54	225.74	72.42	203.90	25.00	137.15	4.43
95th-Percentile Queue Length [veh]	18.96	3.64	13.96	5.21	12.84	1.80	9.33	0.32
95th-Percentile Queue Length [ft]	474.11	90.97	348.94	130.36	320.99	44.99	233.18	7.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	28.83	28.83	17.90	15.29	15.29	38.22	30.28	30.28	40.47	25.87	21.57
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		28.83		15.87			32.22			27.54		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]		24.63										
Intersection LOS		C										
Intersection V/C		0.654										

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.356

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	610	540	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	610	540	10	10	10
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	160	147	3	4	4
Total Analysis Volume [veh/h]	21	640	588	11	16	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	1
g / C, Green / Cycle	0.47	0.47	0.47	0.06
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.32	0.02
s, saturation flow rate [veh/h]	830	1900	1893	1707
c, Capacity [veh/h]	492	888	885	114
d1, Uniform Delay [s]	7.25	4.22	4.10	8.77
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.42	0.34	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.04	0.72	0.68	0.28
d, Delay for Lane Group [s/veh]	7.27	4.64	4.44	9.26
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.33	0.29	0.08
50th-Percentile Queue Length [ft]	1.10	8.30	7.29	2.01
95th-Percentile Queue Length [veh]	0.08	0.60	0.52	0.14
95th-Percentile Queue Length [ft]	1.98	14.94	13.12	3.62

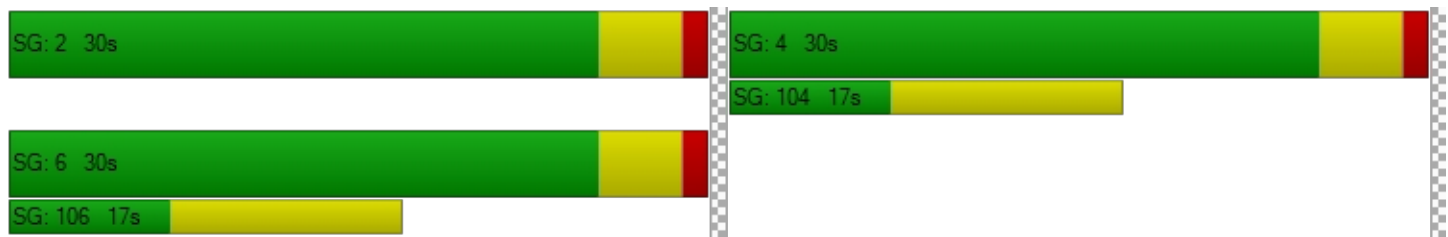


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.27	4.64	4.44	4.44	9.26	9.26
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.72		4.44		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.70					
Intersection LOS	A					
Intersection V/C	0.356					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	950	410	50	1100	430	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	950	410	50	1100	430	130
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	253	109	14	303	126	38
Total Analysis Volume [veh/h]	1014	438	55	1211	505	153
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	82	82	5	91	20	20
g / C, Green / Cycle	0.68	0.68	0.04	0.76	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.38	0.43	0.03	0.33	0.14	0.10
s, saturation flow rate [veh/h]	1900	1706	1810	3618	3514	1535
c, Capacity [veh/h]	1295	1163	72	2747	576	252
d1, Uniform Delay [s]	9.84	10.59	57.02	5.22	48.94	46.54
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	2.53	6.30	0.52	1.73	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.56	0.62	0.77	0.44	0.88	0.61
d, Delay for Lane Group [s/veh]	11.60	13.12	63.32	5.73	50.67	47.43
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	9.98	10.87	1.78	4.87	7.50	4.30
50th-Percentile Queue Length [ft]	249.59	271.87	44.42	121.82	187.51	107.61
95th-Percentile Queue Length [veh]	15.17	16.28	3.20	8.49	11.99	7.71
95th-Percentile Queue Length [ft]	379.14	407.08	79.96	212.33	299.80	192.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.03	13.12	63.32	5.73	50.67	47.43
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	12.36		8.23		49.92	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	18.13					
Intersection LOS	B					
Intersection V/C	0.600					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	40	370	200	60	280	60	280	660	90	50	320	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	370	200	60	280	60	280	660	90	50	320	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	104	56	18	84	18	81	192	26	15	97	3
Total Analysis Volume [veh/h]	45	418	226	72	336	72	325	767	105	61	388	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.04	0.22	0.15	0.07	0.18	0.05	0.25	0.23	0.24	0.10	0.11	0.11
s, saturation flow rate [veh/h]	1053	1900	1538	973	1900	1566	1275	1900	1773	639	1900	1862
c, Capacity [veh/h]	412	842	681	351	842	694	605	810	755	128	480	471
d1, Uniform Delay [s]	18.28	13.97	12.78	21.01	13.24	11.43	14.55	15.11	15.25	34.57	21.93	21.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.09	0.04	0.06	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	2.09	1.30	1.31	1.41	0.30	0.59	0.24	0.36	1.03	0.22	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.50	0.33	0.20	0.40	0.10	0.54	0.55	0.57	0.48	0.42	0.42
d, Delay for Lane Group [s/veh]	18.81	16.06	14.08	22.32	14.66	11.73	15.14	15.35	15.60	35.60	22.15	22.19
Lane Group LOS	B	B	B	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.56	4.63	2.30	1.01	3.49	0.64	3.39	4.88	4.75	1.05	2.65	2.63
50th-Percentile Queue Length [ft]	14.03	115.87	57.42	25.35	87.21	16.04	84.72	121.92	118.74	26.23	66.17	65.79
95th-Percentile Queue Length [veh]	1.01	8.17	4.13	1.83	6.28	1.16	6.10	8.50	8.32	1.89	4.76	4.74
95th-Percentile Queue Length [ft]	25.26	204.14	103.35	45.63	156.98	28.88	152.50	212.46	208.10	47.21	119.11	118.42

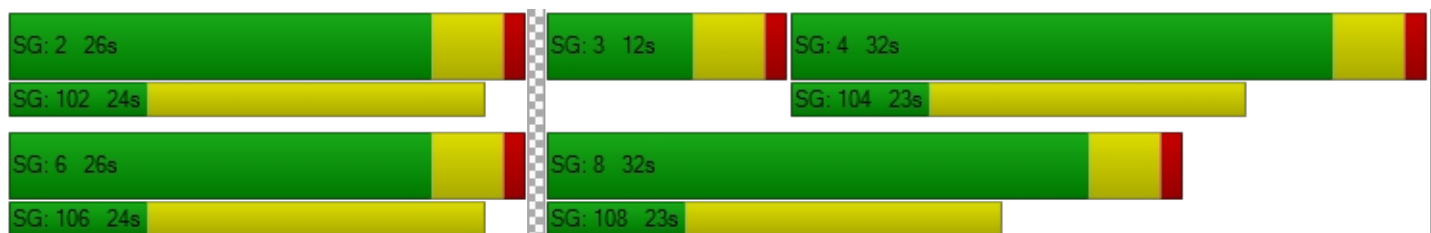


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.81	16.06	14.08	22.32	14.66	11.73	15.14	15.46	15.60	35.60	22.17	22.19
Movement LOS	B	B	B	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	15.59			15.37			15.38			23.95		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.83											
Intersection LOS	B											
Intersection V/C	0.461											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	330	210	70	600	80	370	780	80	20	820	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	330	210	70	600	80	370	780	80	20	820	10
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	96	61	20	173	23	103	216	22	6	230	3
Total Analysis Volume [veh/h]	58	384	245	81	690	92	411	866	89	22	920	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	27	55	7	28	28	12	64	76	4	56	56
g / C, Green / Cycle	0.05	0.22	0.46	0.06	0.23	0.23	0.10	0.54	0.63	0.03	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.11	0.16	0.03	0.21	0.21	0.12	0.24	0.06	0.01	0.25	0.25
s, saturation flow rate [veh/h]	1810	3618	1562	2796	1900	1805	3514	3618	1573	1810	1900	1890
c, Capacity [veh/h]	91	807	719	172	437	415	365	1939	993	55	879	875
d1, Uniform Delay [s]	55.93	40.51	20.71	56.93	45.02	45.14	53.76	16.97	8.64	57.08	22.94	22.95
k, delay calibration	0.04	0.04	0.04	0.04	0.07	0.07	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	0.16	0.10	0.74	5.28	6.46	60.51	0.75	0.01	1.73	2.29	2.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

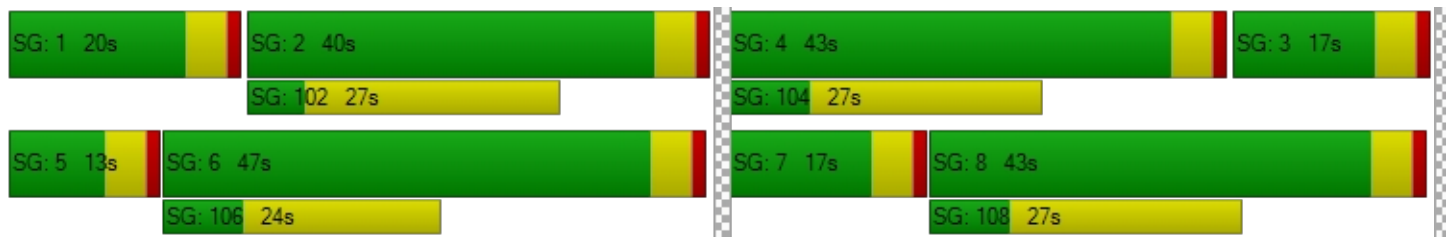
X, volume / capacity	0.64	0.48	0.34	0.47	0.91	0.92	1.13	0.45	0.09	0.40	0.53	0.53
d, Delay for Lane Group [s/veh]	58.73	40.67	20.81	57.67	50.30	51.60	114.27	17.72	8.65	58.81	25.23	25.25
Lane Group LOS	E	D	C	E	D	D	F	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.79	4.97	4.41	1.23	12.15	11.82	8.56	7.36	0.89	0.68	9.84	9.81
50th-Percentile Queue Length [ft]	44.87	124.16	110.24	30.77	303.64	295.45	213.91	183.97	22.20	17.05	246.00	245.14
95th-Percentile Queue Length [veh]	3.23	8.62	7.85	2.22	17.86	17.46	13.97	11.81	1.60	1.23	14.98	14.94
95th-Percentile Queue Length [ft]	80.77	215.53	196.34	55.39	446.53	436.39	349.19	295.20	39.96	30.69	374.62	373.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.73	40.67	20.81	57.67	50.85	51.60	114.27	17.72	8.65	58.81	25.24	25.25
Movement LOS	E	D	C	E	D	D	F	B	A	E	C	C
d_A, Approach Delay [s/veh]	35.11			51.57			46.18			26.02		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	40.45											
Intersection LOS	D											
Intersection V/C	0.609											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	56.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	770	70	470	1230	60	110	1020	20	110	940	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	770	70	470	1230	60	110	1020	20	110	940	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	216	20	120	314	15	33	302	6	30	255	16
Total Analysis Volume [veh/h]	67	862	78	481	1258	61	130	1207	24	120	1021	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	36	36	15	45	45	6	45	45	6	44	44
g / C, Green / Cycle	0.05	0.30	0.30	0.13	0.38	0.38	0.05	0.37	0.37	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.24	0.05	0.14	0.35	0.04	0.04	0.22	0.22	0.03	0.40	0.41
s, saturation flow rate [veh/h]	1810	3618	1535	3514	3618	1542	3514	3618	1872	3514	1800	900
c, Capacity [veh/h]	87	1073	455	451	1364	582	188	1344	696	176	663	331
d1, Uniform Delay [s]	56.47	38.96	31.26	52.28	35.68	24.23	55.81	30.52	30.56	56.03	37.89	37.89
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	2.06	0.25	34.31	4.28	0.11	1.72	2.01	3.88	1.74	60.33	81.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.77	0.80	0.17	1.07	0.92	0.10	0.69	0.60	0.61	0.68	1.09	1.11
d, Delay for Lane Group [s/veh]	61.89	41.02	31.51	86.58	39.96	24.34	57.52	32.53	34.44	57.77	98.22	119.06
Lane Group LOS	E	D	C	F	D	C	E	C	C	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	12.69	1.83	8.74	17.38	1.11	1.98	9.80	10.57	1.83	15.09	17.01
50th-Percentile Queue Length [ft]	55.78	317.32	45.76	218.60	434.47	27.73	49.49	245.01	264.16	45.76	377.25	425.23
95th-Percentile Queue Length [veh]	4.02	18.54	3.29	13.97	24.22	2.00	3.56	14.93	15.90	3.29	22.61	25.36
95th-Percentile Queue Length [ft]	100.41	463.39	82.37	349.15	605.39	49.91	89.08	373.37	397.44	82.36	565.23	633.90

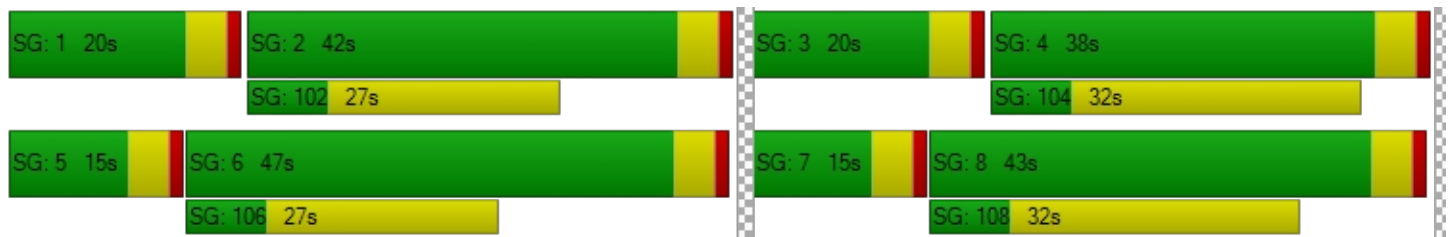


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	41.02	31.51	86.58	39.96	24.34	57.52	33.16	34.44	57.77	104.38	119.06
Movement LOS	E	D	C	F	D	C	E	C	C	E	F	F
d_A, Approach Delay [s/veh]	41.67			51.89			35.51			100.53		
Approach LOS	D			D			D			F		
d_I, Intersection Delay [s/veh]	56.74											
Intersection LOS	E											
Intersection V/C	0.829											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	40.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	10	260	70	10	60	40	1390	10	20	1510	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	10	260	70	10	60	40	1390	10	20	1510	10
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	4	94	23	3	20	10	355	3	5	397	3
Total Analysis Volume [veh/h]	86	14	374	92	13	79	41	1420	10	21	1588	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	5	72	72	4	71	71
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.25	0.04	0.60	0.60	0.03	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.07	0.01	0.24	0.07	0.06	0.02	0.26	0.26	0.01	0.58	0.61
s, saturation flow rate [veh/h]	1320	1900	1577	1409	1621	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	309	478	397	381	408	79	2184	1143	54	1061	531
d1, Uniform Delay [s]	42.20	33.82	44.00	38.22	35.59	56.09	12.72	12.72	57.10	24.22	24.60
k, delay calibration	0.04	0.04	0.27	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.01	21.67	0.32	0.28	1.95	0.62	1.18	1.72	25.13	48.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.03	0.94	0.24	0.23	0.52	0.43	0.43	0.39	0.99	1.04
d, Delay for Lane Group [s/veh]	42.38	33.83	65.68	38.55	35.87	58.04	13.34	13.90	58.83	49.35	73.09
Lane Group LOS	D	C	E	D	D	E	B	B	E	D	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.21	0.31	13.08	2.26	2.16	1.26	6.73	7.23	0.65	17.29	21.10
50th-Percentile Queue Length [ft]	55.37	7.72	327.06	56.47	53.97	31.47	168.32	180.65	16.28	432.33	527.57
95th-Percentile Queue Length [veh]	3.99	0.56	19.01	4.07	3.89	2.27	10.99	11.63	1.17	24.11	29.45
95th-Percentile Queue Length [ft]	99.67	13.90	475.36	101.65	97.15	56.64	274.70	290.87	29.31	602.82	736.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.38	33.83	65.68	38.55	35.87	35.87	58.04	13.53	13.90	58.83	57.39	73.09
Movement LOS	D	C	E	D	D	D	E	B	B	E	E	E
d_A, Approach Delay [s/veh]	60.51			37.21			14.77			57.52		
Approach LOS	E			D			B			E		
d_I, Intersection Delay [s/veh]	40.13											
Intersection LOS	D											
Intersection V/C	0.870											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.913

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	550	1190	330	0	0	1820
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	550	1190	330	0	0	1820
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	142	307	88	0	0	488
Total Analysis Volume [veh/h]	567	1227	351	0	0	1954
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	24	95	16	87
g / C, Green / Cycle	0.20	0.79	0.13	0.72
(v / s)_i Volume / Saturation Flow Rate	0.16	0.43	0.10	0.75
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	707	2228	484	1878
d1, Uniform Delay [s]	45.65	4.71	49.83	16.66
k, delay calibration	0.04	0.31	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	0.61	0.78	32.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.80	0.55	0.72	1.04
d, Delay for Lane Group [s/veh]	46.47	5.31	50.61	48.87
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.73	3.44	5.10	14.95
50th-Percentile Queue Length [ft]	193.16	86.05	127.56	373.77
95th-Percentile Queue Length [veh]	12.29	6.20	8.81	22.00
95th-Percentile Queue Length [ft]	307.13	154.88	220.17	549.99

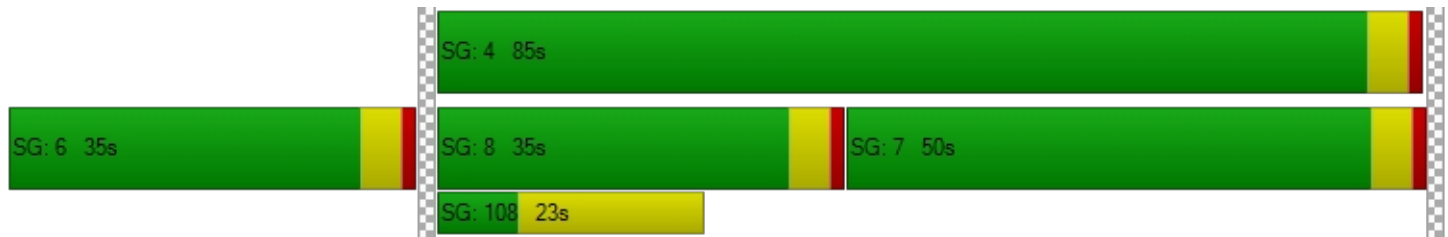


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	46.47	5.31	50.61	0.00	0.00	48.87
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	18.32		50.61		48.87	
Approach LOS	B		D		D	
d_I, Intersection Delay [s/veh]	35.65					
Intersection LOS	D					
Intersection V/C	0.913					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	59.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.091

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	330	200	1050	1320	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	330	200	1050	1320	0
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	12	0	0	0	0	101	61	280	352	0
Total Analysis Volume [veh/h]	0	0	46	0	0	0	0	404	245	1120	1408	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		22	22	89	115	115
g / C, Green / Cycle		0.18	0.18	0.74	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.11	0.16	0.93	0.37	0.37
s, saturation flow rate [veh/h]		3618	1556	1200	1900	1900
c, Capacity [veh/h]		651	280	892	1827	1827
d1, Uniform Delay [s]		45.39	47.85	15.39	0.14	0.14
k, delay calibration		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.36	3.41	124.19	0.62	0.62
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

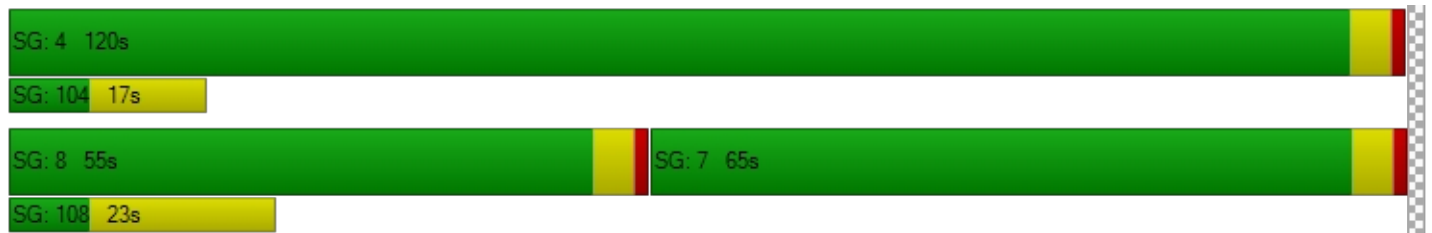
X, volume / capacity		0.62	0.88	1.26	0.39	0.39
d, Delay for Lane Group [s/veh]		45.75	51.27	139.58	0.76	0.76
Lane Group LOS		D	D	F	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		5.59	7.37	25.24	0.31	0.31
50th-Percentile Queue Length [ft]		139.73	184.27	631.08	7.82	7.82
95th-Percentile Queue Length [veh]		9.47	11.82	39.67	0.56	0.56
95th-Percentile Queue Length [ft]		236.66	295.58	991.80	14.07	14.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.75	51.27	139.58	0.76	0.76
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			47.83			62.26		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	59.31											
Intersection LOS	E											
Intersection V/C	1.091											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			+						┘		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	40	40	20	30	30	20	510	23	60	1220	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	40	40	20	30	30	20	510	23	60	1220	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	13	13	7	11	11	6	148	6	16	324	0
Total Analysis Volume [veh/h]	19	52	52	29	44	44	23	590	24	64	1296	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	93	93	93	93
g / C, Green / Cycle	0.15	0.15	0.78	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.19	0.18	0.39	0.39
s, saturation flow rate [veh/h]	1659	1290	1604	1729	1741	1729
c, Capacity [veh/h]	242	225	1280	1344	1387	1344
d1, Uniform Delay [s]	46.68	47.86	3.52	3.63	4.64	4.86
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.69	0.43	0.41	1.27	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.43	0.52	0.23	0.23	0.50	0.50
d, Delay for Lane Group [s/veh]	47.13	48.55	3.94	4.03	5.91	6.19
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.84	3.35	1.75	1.89	5.36	5.49
50th-Percentile Queue Length [ft]	71.08	83.85	43.80	47.37	133.90	137.18
95th-Percentile Queue Length [veh]	5.12	6.04	3.15	3.41	9.15	9.33
95th-Percentile Queue Length [ft]	127.95	150.93	78.85	85.26	228.78	233.22

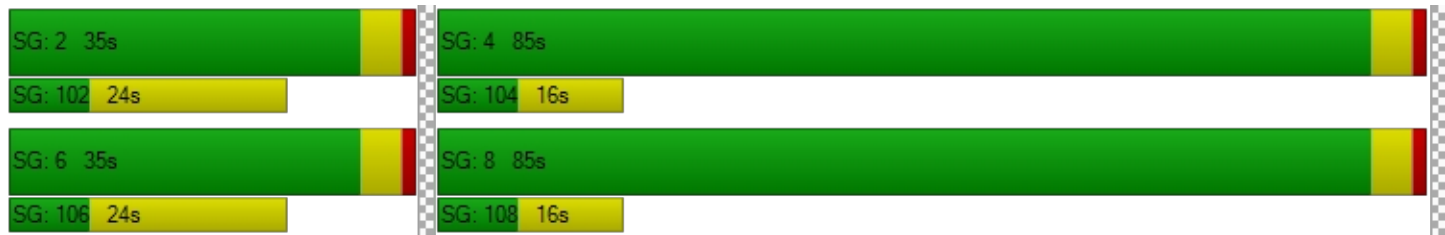


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.13	47.13	48.55	48.55	48.55	3.94	3.99	0.00	5.91	6.06	6.19
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		47.13		48.55			3.99			6.05		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]		9.69										
Intersection LOS		A										
Intersection V/C		0.485										

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	290	890	30	10	640	80	30	150	20	300	350	590
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	290	890	30	10	640	80	30	150	20	300	350	590
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	229	8	3	172	22	9	44	6	79	92	156
Total Analysis Volume [veh/h]	299	918	31	11	689	86	35	177	24	317	370	623
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	34	61	61	2	29	29	27	27	27	44	44	82
g / C, Green / Cycle	0.28	0.51	0.51	0.01	0.24	0.24	0.22	0.22	0.22	0.36	0.36	0.68
(v / s)_j Volume / Saturation Flow Rate	0.09	0.25	0.25	0.01	0.21	0.21	0.03	0.09	0.02	0.22	0.19	0.39
s, saturation flow rate [veh/h]	3514	1900	1868	1810	1900	1788	1020	1900	1506	1427	1900	1578
c, Capacity [veh/h]	988	965	949	24	455	428	112	423	335	511	692	1079
d1, Uniform Delay [s]	33.87	19.41	19.45	58.80	43.79	44.06	55.92	39.99	36.85	30.56	30.11	9.91
k, delay calibration	0.50	0.50	0.50	0.04	0.28	0.29	0.04	0.04	0.04	0.10	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	1.81	1.86	5.28	11.88	14.93	0.58	0.25	0.03	1.17	0.24	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

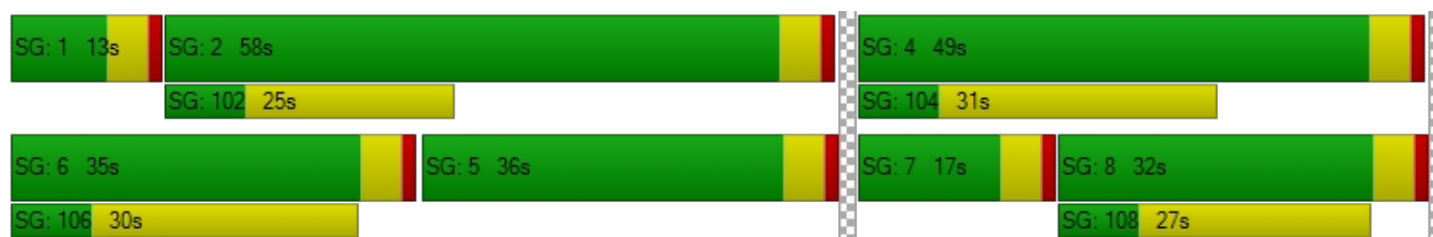
X, volume / capacity	0.30	0.49	0.50	0.47	0.87	0.89	0.31	0.42	0.07	0.62	0.53	0.58
d, Delay for Lane Group [s/veh]	34.66	21.22	21.31	64.08	55.68	58.99	56.51	40.24	36.89	31.73	30.35	12.16
Lane Group LOS	C	C	C	E	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.52	8.96	8.89	0.36	12.58	12.51	1.05	4.48	0.56	7.20	8.45	8.55
50th-Percentile Queue Length [ft]	87.90	223.93	222.27	9.10	314.59	312.82	26.28	111.94	13.97	179.94	211.32	213.87
95th-Percentile Queue Length [veh]	6.33	13.87	13.78	0.66	18.40	18.31	1.89	7.95	1.01	11.60	13.22	13.35
95th-Percentile Queue Length [ft]	158.23	346.64	344.52	16.39	460.03	457.85	47.30	198.70	25.15	289.93	330.53	333.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.66	21.26	21.31	64.08	57.09	58.99	56.51	40.24	36.89	31.73	30.35	12.16
Movement LOS	C	C	C	E	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	24.47			57.40			42.31			22.03		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	31.98											
Intersection LOS	C											
Intersection V/C	0.683											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	30	520	580	90	170	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	520	580	90	170	140
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	140	156	24	47	38
Total Analysis Volume [veh/h]	32	560	624	97	186	153
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	71	71	12	12
g / C, Green / Cycle	0.78	0.78	0.71	0.71	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.33	0.06	0.10	0.10
s, saturation flow rate [veh/h]	884	1900	1900	1592	1810	1517
c, Capacity [veh/h]	680	1490	1346	1128	224	188
d1, Uniform Delay [s]	3.54	3.30	6.34	4.53	42.75	42.66
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.73	1.15	0.15	3.02	3.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.38	0.46	0.09	0.83	0.81
d, Delay for Lane Group [s/veh]	3.67	4.03	7.49	4.68	45.77	45.89
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.11	2.41	4.85	0.54	4.59	3.78
50th-Percentile Queue Length [ft]	2.78	60.28	121.32	13.47	114.67	94.48
95th-Percentile Queue Length [veh]	0.20	4.34	8.47	0.97	8.10	6.80
95th-Percentile Queue Length [ft]	5.01	108.51	211.63	24.24	202.48	170.07



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	3.67	4.03	7.49	4.68	45.77	45.89
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.01		7.11		45.83	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	13.94					
Intersection LOS	B					
Intersection V/C	0.436					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.621

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	680	70	140	790	270	110	350	150	210	260	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	680	70	140	790	270	110	350	150	210	260	120
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	180	19	37	208	71	29	92	40	55	68	31
Total Analysis Volume [veh/h]	95	720	74	148	834	285	116	369	158	220	273	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	45	45	12	49	49	25	25	25	19	19	19
g / C, Green / Cycle	0.07	0.38	0.38	0.10	0.41	0.41	0.21	0.21	0.21	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.20	0.05	0.08	0.23	0.18	0.06	0.19	0.10	0.12	0.14	0.08
s, saturation flow rate [veh/h]	1810	3618	1531	1810	3618	1553	1810	1900	1543	1810	1900	1548
c, Capacity [veh/h]	120	1362	576	176	1473	632	382	401	326	293	307	250
d1, Uniform Delay [s]	55.21	29.15	24.53	53.26	27.41	25.83	39.91	46.35	41.61	48.03	49.27	45.93
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.21	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.47	0.46	4.06	1.58	2.31	0.16	15.27	0.42	1.48	5.64	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

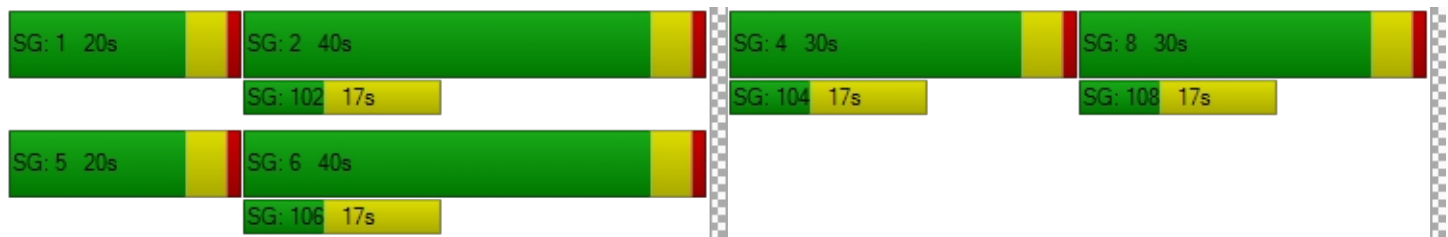
X, volume / capacity	0.79	0.53	0.13	0.84	0.57	0.45	0.30	0.92	0.48	0.75	0.89	0.50
d, Delay for Lane Group [s/veh]	59.51	30.62	24.99	57.32	28.99	28.15	40.07	61.62	42.02	49.51	54.91	46.51
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.22	1.45	4.80	10.19	6.76	2.89	12.32	4.12	6.34	8.40	3.45
50th-Percentile Queue Length [ft]	73.84	205.43	36.18	120.06	254.67	168.99	72.30	308.10	103.00	158.58	210.07	86.22
95th-Percentile Queue Length [veh]	5.32	12.92	2.60	8.40	15.42	11.02	5.21	18.08	7.42	10.47	13.16	6.21
95th-Percentile Queue Length [ft]	132.92	322.96	65.12	209.91	385.52	275.59	130.15	452.03	185.41	261.85	328.92	155.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	30.62	24.99	57.32	28.99	28.15	40.07	61.62	42.02	49.51	54.91	46.51
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	33.24			32.11			52.92			51.28		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.79											
Intersection LOS	D											
Intersection V/C	0.621											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	100	460	60	40	430	100	70	460	90	70	350	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	460	60	40	430	100	70	460	90	70	350	70
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	17	11	119	28	19	123	24	20	98	20
Total Analysis Volume [veh/h]	113	520	68	44	475	110	75	494	97	79	393	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.13	0.32	0.05	0.32	0.07	0.26	0.06	0.09	0.21	0.05
s, saturation flow rate [veh/h]	843	1854	841	1831	1006	1900	1571	917	1900	1562
c, Capacity [veh/h]	283	872	285	861	298	716	592	230	716	588
d1, Uniform Delay [s]	22.55	12.34	20.47	12.39	21.97	15.76	12.43	25.44	14.71	12.29
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.16	4.16	1.15	4.31	0.16	0.45	0.05	0.33	0.25	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.67	0.15	0.68	0.25	0.69	0.16	0.34	0.55	0.13
d, Delay for Lane Group [s/veh]	26.72	16.50	21.62	16.70	22.13	16.21	12.48	25.77	14.95	12.32
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.74	6.33	0.58	6.16	0.87	4.94	0.76	1.02	3.65	0.61
50th-Percentile Queue Length [ft]	43.42	158.36	14.50	153.89	21.81	123.58	18.99	25.49	91.29	15.28
95th-Percentile Queue Length [veh]	3.13	10.46	1.04	10.22	1.57	8.59	1.37	1.84	6.57	1.10
95th-Percentile Queue Length [ft]	78.16	261.56	26.10	255.61	39.26	214.74	34.18	45.88	164.32	27.51

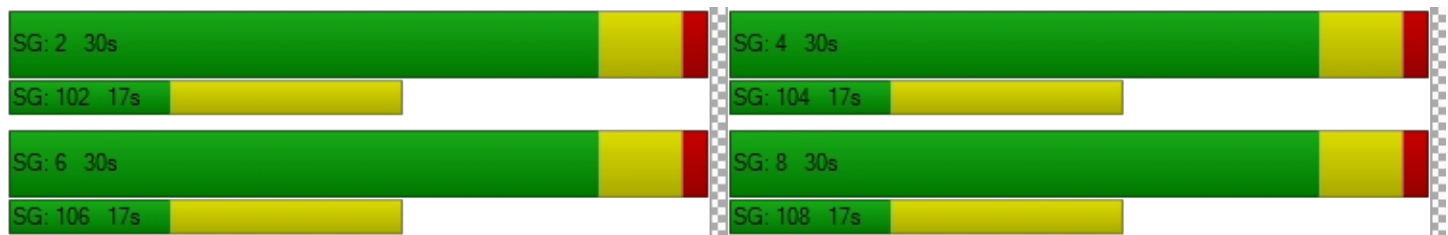


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.72	16.50	16.50	21.62	16.70	16.70	22.13	16.21	12.48	25.77	14.95	12.32
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.15			17.04			16.34			16.13		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.96											
Intersection LOS	B											
Intersection V/C	0.580											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.692

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	1090	110	80	1120	140	80	420	150	130	320	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1090	110	80	1120	140	80	420	150	130	320	70
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	295	30	22	310	39	21	109	39	35	86	19
Total Analysis Volume [veh/h]	65	1179	119	89	1241	155	83	436	156	140	345	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	57	57	68	57	57	42	29	29	42	31	31
g / C, Green / Cycle	0.57	0.48	0.48	0.57	0.48	0.48	0.35	0.25	0.25	0.35	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.11	0.35	0.35	0.14	0.37	0.39	0.07	0.23	0.10	0.12	0.18	0.05
s, saturation flow rate [veh/h]	577	1900	1814	619	1900	1777	1217	1900	1504	1187	1900	1507
c, Capacity [veh/h]	287	903	862	317	910	851	347	465	368	293	494	392
d1, Uniform Delay [s]	19.57	25.25	25.51	18.12	25.94	26.56	28.02	44.36	38.14	30.66	40.10	34.54
k, delay calibration	0.50	0.50	0.50	0.48	0.50	0.50	0.04	0.16	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.82	5.13	5.74	2.12	6.50	8.15	0.13	12.45	0.29	0.45	0.67	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

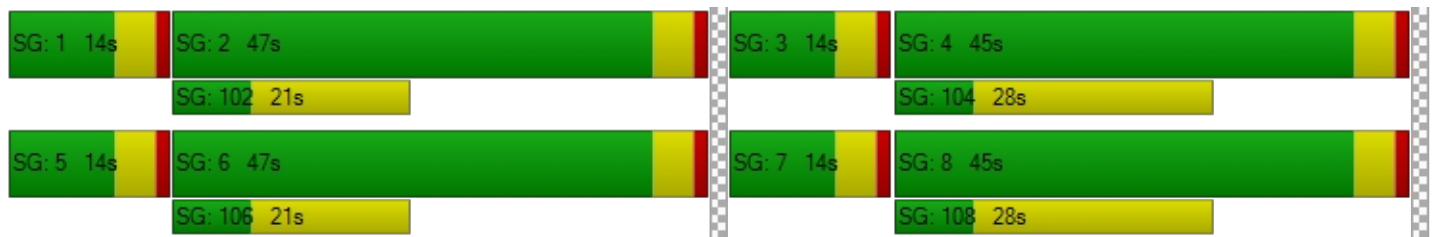
X, volume / capacity	0.23	0.73	0.74	0.28	0.78	0.81	0.24	0.94	0.42	0.48	0.70	0.19
d, Delay for Lane Group [s/veh]	21.40	30.38	31.25	20.24	32.44	34.71	28.15	56.81	38.42	31.11	40.77	34.62
Lane Group LOS	C	C	C	C	C	C	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.90	15.74	15.59	1.24	17.71	17.92	1.61	14.08	3.87	2.83	9.17	1.71
50th-Percentile Queue Length [ft]	22.58	393.54	389.74	30.96	442.85	448.05	40.37	352.04	96.64	70.79	229.17	42.71
95th-Percentile Queue Length [veh]	1.63	22.25	22.06	2.23	24.62	24.86	2.91	20.24	6.96	5.10	14.13	3.08
95th-Percentile Queue Length [ft]	40.64	556.21	551.62	55.73	615.41	621.62	72.67	505.89	173.95	127.42	353.31	76.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.40	30.76	31.25	20.24	33.42	34.71	28.15	56.81	38.42	31.11	40.77	34.62
Movement LOS	C	C	C	C	C	C	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	30.36			32.76			49.04			37.53		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.30											
Intersection LOS	D											
Intersection V/C	0.692											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	50	190	40	20	160	30	50	570	50	30	490	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	190	40	20	160	30	50	570	50	30	490	60
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	53	11	6	51	10	13	144	13	8	137	17
Total Analysis Volume [veh/h]	56	213	45	26	205	38	50	575	50	34	548	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	82	82	82	82
g / C, Green / Cycle	0.24	0.24	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.22	0.17	0.06	0.33	0.04	0.33
s, saturation flow rate [veh/h]	1439	1587	820	1866	813	1855
c, Capacity [veh/h]	378	410	479	1279	473	1271
d1, Uniform Delay [s]	44.53	40.98	15.29	8.93	15.13	8.89
k, delay calibration	0.26	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.55	2.23	0.44	1.34	0.29	1.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.83	0.66	0.10	0.49	0.07	0.48
d, Delay for Lane Group [s/veh]	55.09	43.21	15.72	10.27	15.42	10.21
Lane Group LOS	E	D	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	10.15	7.35	0.76	7.40	0.51	7.24
50th-Percentile Queue Length [ft]	253.79	183.85	19.00	184.90	12.73	181.06
95th-Percentile Queue Length [veh]	15.38	11.80	1.37	11.86	0.92	11.66
95th-Percentile Queue Length [ft]	384.42	295.04	34.20	296.41	22.91	291.40

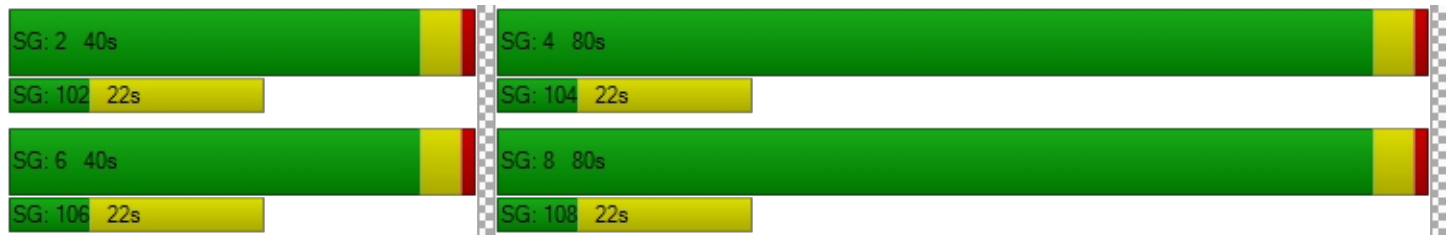


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.09	55.09	55.09	43.21	43.21	43.21	15.72	10.27	10.27	15.42	10.21	10.21
Movement LOS	E	E	E	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	55.09			43.21			10.67			10.48		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	22.51											
Intersection LOS	C											
Intersection V/C	0.553											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	80	830	60	80	850	80	80	490	70	180	420	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	830	60	80	850	80	80	490	70	180	420	20
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	229	17	21	224	21	21	129	18	50	117	6
Total Analysis Volume [veh/h]	88	918	66	84	896	84	84	514	73	200	467	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	61	52	52	61	52	52	49	34	34	49	40	40
g / C, Green / Cycle	0.51	0.43	0.43	0.51	0.43	0.43	0.41	0.28	0.28	0.41	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.12	0.26	0.26	0.12	0.26	0.26	0.08	0.27	0.05	0.17	0.25	0.01
s, saturation flow rate [veh/h]	732	1900	1842	729	1900	1823	1077	1900	1526	1146	1900	1501
c, Capacity [veh/h]	343	822	797	342	822	788	326	540	434	323	628	497
d1, Uniform Delay [s]	18.13	26.14	26.21	18.04	26.17	26.27	24.94	42.11	32.26	28.38	35.61	27.25
k, delay calibration	0.50	0.50	0.50	0.30	0.50	0.50	0.07	0.33	0.04	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.80	3.30	3.46	1.03	3.30	3.54	0.26	21.87	0.07	0.72	2.92	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

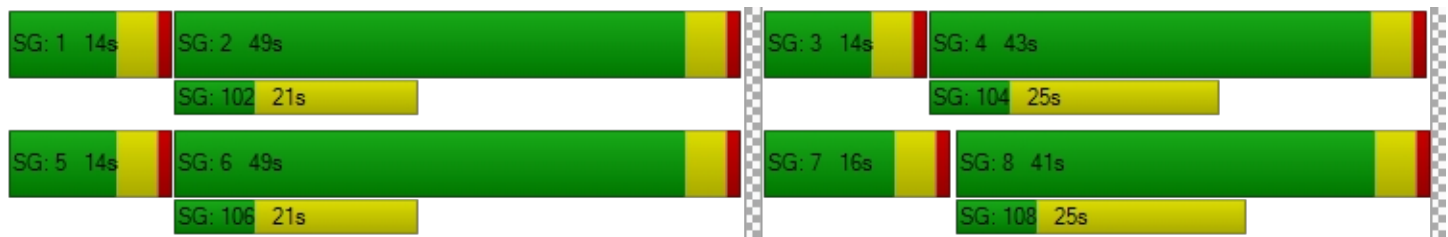
X, volume / capacity	0.26	0.61	0.61	0.25	0.61	0.61	0.26	0.95	0.17	0.62	0.74	0.04
d, Delay for Lane Group [s/veh]	19.93	29.43	29.67	19.07	29.47	29.81	25.20	63.98	32.33	29.11	38.52	27.27
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.41	11.55	11.34	1.28	11.55	11.29	1.47	17.89	1.60	3.77	12.38	0.43
50th-Percentile Queue Length [ft]	35.32	288.76	283.54	32.00	288.71	282.34	36.86	447.20	39.94	94.18	309.54	10.75
95th-Percentile Queue Length [veh]	2.54	17.12	16.86	2.30	17.12	16.81	2.65	24.82	2.88	6.78	18.15	0.77
95th-Percentile Queue Length [ft]	63.57	428.10	421.62	57.60	428.04	420.13	66.34	620.60	71.89	169.52	453.81	19.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.93	29.54	29.67	19.07	29.62	29.81	25.20	63.98	32.33	29.11	38.52	27.27
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	28.76			28.80			55.68			35.43		
Approach LOS	C			C			E			D		
d_I, Intersection Delay [s/veh]	35.25											
Intersection LOS	D											
Intersection V/C	0.639											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	60	520	140	20	250	30	50	550	70	10	500	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	520	140	20	250	30	50	550	70	10	500	60
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	144	39	5	68	8	13	145	18	3	146	18
Total Analysis Volume [veh/h]	66	576	155	22	272	33	53	581	74	12	583	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.34	0.11	0.03	0.16	0.02	0.07	0.34	0.06	0.02	0.34	0.05
s, saturation flow rate [veh/h]	1009	1710	1380	765	1710	1416	751	1710	1315	756	1710	1280
c, Capacity [veh/h]	418	843	681	199	843	698	183	641	493	184	641	480
d1, Uniform Delay [s]	17.65	13.51	10.10	27.52	10.66	9.18	30.01	20.65	14.45	28.25	20.69	14.42
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.16	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	4.46	0.78	1.12	1.01	0.13	0.32	7.16	0.05	0.05	7.44	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.16	0.68	0.23	0.11	0.32	0.05	0.29	0.91	0.15	0.07	0.91	0.15
d, Delay for Lane Group [s/veh]	18.46	17.97	10.87	28.64	11.67	9.30	30.33	27.81	14.50	28.30	28.13	14.48
Lane Group LOS	B	B	B	C	B	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.82	6.88	1.32	0.38	2.41	0.25	0.83	9.22	0.71	0.18	9.31	0.68
50th-Percentile Queue Length [ft]	20.40	172.10	33.03	9.40	60.30	6.30	20.71	230.46	17.87	4.40	232.77	16.88
95th-Percentile Queue Length [veh]	1.47	11.19	2.38	0.68	4.34	0.45	1.49	14.20	1.29	0.32	14.32	1.22
95th-Percentile Queue Length [ft]	36.71	279.67	59.45	16.93	108.54	11.34	37.28	354.95	32.17	7.92	357.88	30.39

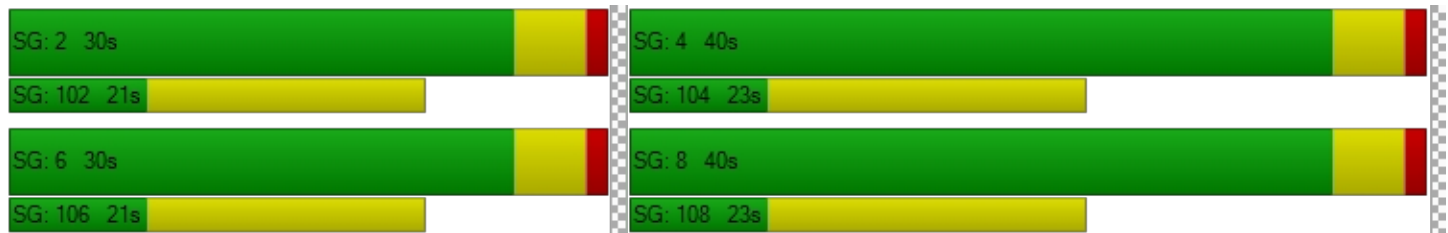


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.46	17.97	10.87	28.64	11.67	9.30	30.33	27.81	14.50	28.30	28.13	14.48
Movement LOS	B	B	B	C	B	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	16.63			12.57			26.61			26.70		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.61											
Intersection LOS	C											
Intersection V/C	0.678											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	50	420	120	40	500	130	110	440	150	190	470	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	420	120	40	500	130	110	440	150	190	470	80
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	116	33	11	133	35	30	120	41	55	135	23
Total Analysis Volume [veh/h]	55	463	132	43	532	138	120	479	163	219	541	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	41	41	31	31	31	8	25	25	10	28	28
g / C, Green / Cycle	0.06	0.46	0.46	0.35	0.35	0.35	0.08	0.27	0.27	0.12	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.03	0.24	0.09	0.05	0.18	0.19	0.07	0.25	0.11	0.12	0.17	0.18
s, saturation flow rate [veh/h]	1810	1900	1541	936	1900	1711	1810	1900	1476	1810	1900	1761
c, Capacity [veh/h]	107	869	704	216	659	594	152	521	404	209	581	538
d1, Uniform Delay [s]	41.15	17.56	14.52	34.51	23.50	23.70	40.49	31.77	26.71	39.85	26.21	26.35
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.22	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.42	2.34	0.59	2.06	2.98	3.57	3.40	12.68	0.24	46.55	0.31	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

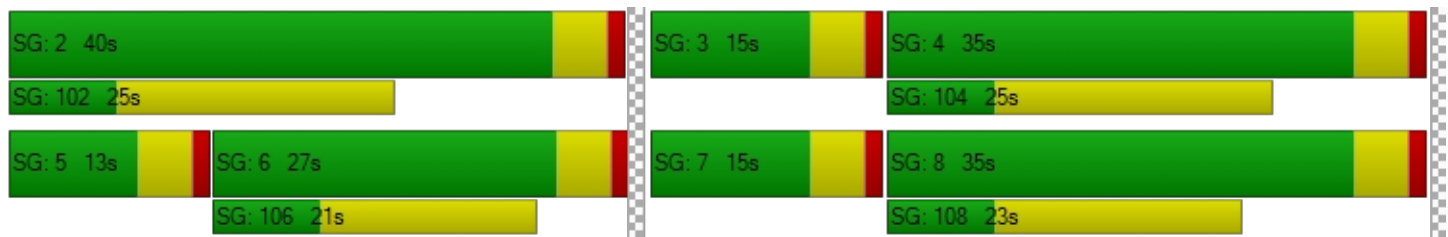
X, volume / capacity	0.51	0.53	0.19	0.20	0.53	0.54	0.79	0.92	0.40	1.05	0.56	0.57
d, Delay for Lane Group [s/veh]	42.57	19.90	15.11	36.57	26.48	27.27	43.89	44.45	26.95	86.40	26.53	26.71
Lane Group LOS	D	B	B	D	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.21	7.11	1.66	0.96	6.23	5.95	2.72	11.63	2.83	7.21	5.63	5.39
50th-Percentile Queue Length [ft]	30.36	177.64	41.44	23.92	155.83	148.75	67.99	290.71	70.73	180.34	140.86	134.77
95th-Percentile Queue Length [veh]	2.19	11.48	2.98	1.72	10.33	9.95	4.90	17.22	5.09	11.83	9.53	9.20
95th-Percentile Queue Length [ft]	54.66	286.93	74.60	43.05	258.19	248.76	122.38	430.53	127.32	295.65	238.18	229.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.57	19.90	15.11	36.57	26.75	27.27	43.89	44.45	26.95	86.40	26.60	26.71
Movement LOS	D	B	B	D	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	20.84			27.44			40.62			41.99		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.54											
Intersection LOS	C											
Intersection V/C	0.617											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			0.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	20	350	60	250	0	390	220	880	0	0	1020	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	350	60	250	0	390	220	880	0	0	1020	160
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	0.8935	0.8935	1.0000	1.0000	0.9224	0.9224
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	115	20	68	0	106	62	246	0	0	276	43
Total Analysis Volume [veh/h]	26	459	79	273	0	425	246	985	0	0	1106	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			0			173		
Bicycle Volume [bicycles/h]	32			6			0			28		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	8	0	7	0	4	5	2	0	0	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	0	7	7	7	0	0	7	0
Maximum Green [s]	15	30	0	30	0	30	15	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	35	0	22	0	45	21	63	0	0	42	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	4.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	18	0	0	20	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	No		No		No	No	Yes			Yes	
Maximum Recall	No	No		No		No	No	No			No	
Pedestrian Recall	No	No		No		No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	4	29	29	11	58	16	65	44	44
g / C, Green / Cycle	0.03	0.25	0.25	0.09	0.48	0.14	0.54	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.16	0.08	0.15	0.14	0.27	0.34	0.36
s, saturation flow rate [veh/h]	1810	1900	1633	3514	2816	1810	3618	1900	1773
c, Capacity [veh/h]	62	466	400	334	1354	247	1971	703	656
d1, Uniform Delay [s]	56.79	39.98	40.77	53.28	19.04	51.77	17.08	35.91	37.27
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.40	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	0.45	0.69	1.89	0.05	50.14	0.91	17.94	29.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.42	0.59	0.66	0.82	0.31	1.00	0.50	0.91	0.98
d, Delay for Lane Group [s/veh]	58.47	40.42	41.46	55.16	19.09	101.91	17.99	53.85	66.88
Lane Group LOS	E	D	D	E	B	F	B	D	E
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.80	7.21	7.07	4.13	3.62	11.20	9.48	20.32	22.84
50th-Percentile Queue Length [ft]	20.06	180.28	176.68	103.15	90.39	279.96	236.89	507.89	571.05
95th-Percentile Queue Length [veh]	1.44	11.62	11.43	7.43	6.51	16.69	14.52	27.71	30.68
95th-Percentile Queue Length [ft]	36.10	290.38	285.67	185.67	162.70	417.16	363.10	692.68	767.01

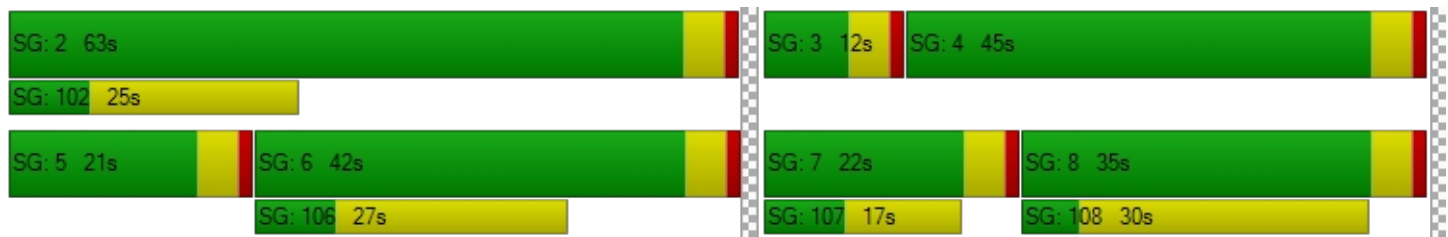


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.47	40.84	41.46	55.16	0.00	19.09	101.91	17.99	0.00	0.00	59.34	66.88
Movement LOS	E	D	D	E		B	F	B			E	E
d_A, Approach Delay [s/veh]	41.74			33.20			34.76			60.36		
Approach LOS	D			C			C			E		
d_I, Intersection Delay [s/veh]	44.20											
Intersection LOS	D											
Intersection V/C	0.736											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1100	70	60	1300	30	60	110	50	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1100	70	60	1300	30	60	110	50	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	295	19	15	335	8	18	33	15	11	29	7
Total Analysis Volume [veh/h]	32	1180	75	62	1342	31	72	131	60	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.33	0.34	0.14	0.36	0.36	0.17	0.12
s, saturation flow rate [veh/h]	401	1900	1854	449	1900	1878	1565	1565
c, Capacity [veh/h]	266	1252	1221	298	1252	1237	411	409
d1, Uniform Delay [s]	13.71	6.98	7.00	13.43	7.29	7.32	28.63	26.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.92	1.46	1.52	1.59	1.74	1.78	0.62	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

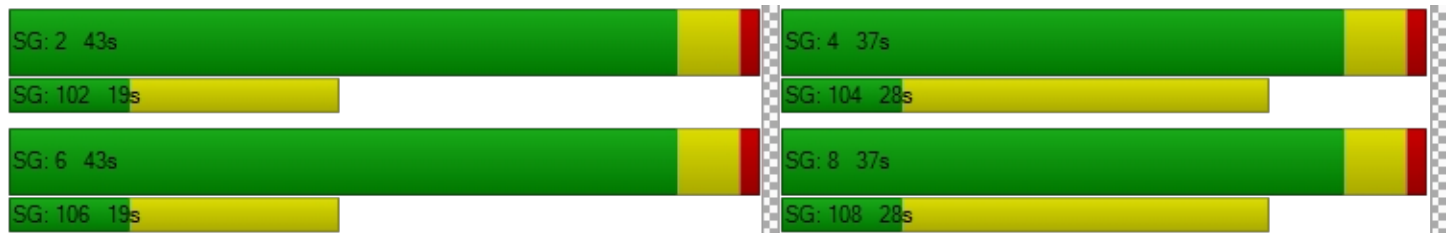
X, volume / capacity	0.12	0.51	0.51	0.21	0.55	0.55	0.64	0.46
d, Delay for Lane Group [s/veh]	14.63	8.44	8.51	15.02	9.04	9.10	29.25	27.00
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.39	4.77	4.71	0.77	5.45	5.45	4.52	2.96
50th-Percentile Queue Length [ft]	9.87	119.35	117.81	19.22	136.36	136.19	113.12	74.04
95th-Percentile Queue Length [veh]	0.71	8.36	8.27	1.38	9.28	9.28	8.01	5.33
95th-Percentile Queue Length [ft]	17.76	208.94	206.82	34.60	232.11	231.89	200.33	133.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.63	8.47	8.51	15.02	9.07	9.10	29.25	29.25	29.25	27.00	27.00	27.00
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.63			9.33			29.25			27.00		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.74											
Intersection LOS	B											
Intersection V/C	0.532											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	990	30	10	990	10	30	160	60	10	170	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	990	30	10	990	10	30	160	60	10	170	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	261	8	3	257	3	9	49	18	3	47	3
Total Analysis Volume [veh/h]	42	1044	32	10	1028	10	36	194	73	11	187	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	18	18
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.28	0.29	0.02	0.27	0.27	0.17	0.11
s, saturation flow rate [veh/h]	551	1900	1874	532	1900	1891	1739	1854
c, Capacity [veh/h]	358	1243	1226	345	1243	1237	452	475
d1, Uniform Delay [s]	11.37	6.67	6.68	11.03	6.57	6.58	28.42	26.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.67	1.11	1.13	0.16	1.04	1.05	0.65	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.44	0.44	0.03	0.42	0.42	0.67	0.44
d, Delay for Lane Group [s/veh]	12.04	7.79	7.82	11.19	7.61	7.62	29.06	26.80
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.45	4.01	3.98	0.10	3.79	3.78	5.17	3.31
50th-Percentile Queue Length [ft]	11.32	100.23	99.49	2.58	94.78	94.55	129.26	82.83
95th-Percentile Queue Length [veh]	0.81	7.22	7.16	0.19	6.82	6.81	8.90	5.96
95th-Percentile Queue Length [ft]	20.37	180.41	179.08	4.65	170.60	170.19	222.48	149.09

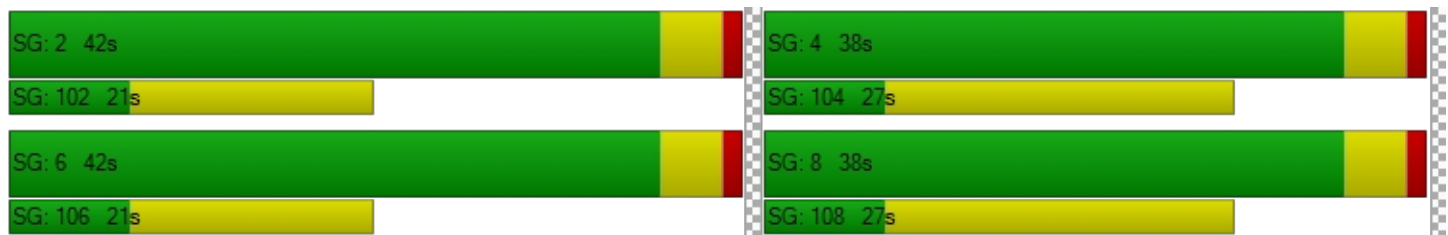


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.04	7.80	7.82	11.19	7.62	7.62	29.06	29.06	29.06	26.80	26.80	26.80
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.96			7.65			29.06			26.80		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.70											
Intersection LOS	B											
Intersection V/C	0.460											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	40	1230	20	30	1320	90	30	100	30	110	90	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1230	20	30	1320	90	30	100	30	110	90	40
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	363	6	8	336	23	8	27	8	32	26	11
Total Analysis Volume [veh/h]	47	1452	24	31	1346	92	32	108	32	126	103	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	21	21	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.12	0.39	0.39	0.09	0.38	0.39	0.13	0.02	0.18	0.03
s, saturation flow rate [veh/h]	377	1900	1886	364	1900	1846	1063	1525	1300	1564
c, Capacity [veh/h]	228	1179	1170	222	1179	1145	337	404	414	414
d1, Uniform Delay [s]	18.37	9.44	9.46	17.82	9.32	9.39	23.86	22.09	26.24	22.28
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.04	2.53	2.57	1.32	2.41	2.55	0.31	0.03	0.43	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

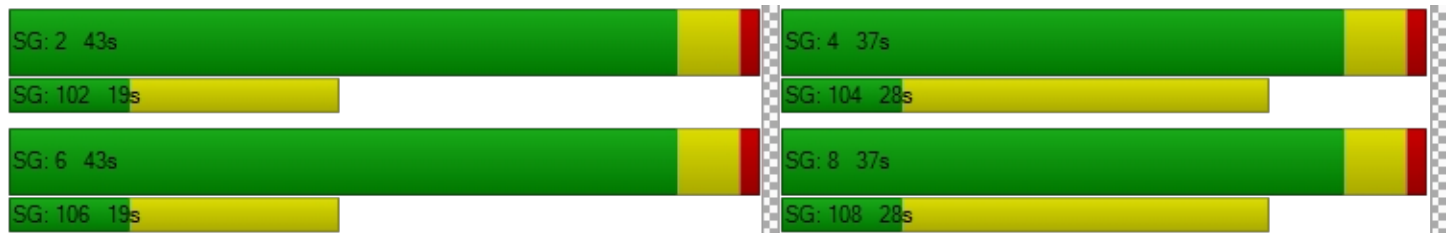
X, volume / capacity	0.21	0.63	0.63	0.14	0.62	0.62	0.42	0.08	0.55	0.11
d, Delay for Lane Group [s/veh]	20.41	11.97	12.03	19.13	11.73	11.95	24.17	22.12	26.68	22.32
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.72	7.29	7.28	0.46	7.04	7.01	2.03	0.44	3.72	0.63
50th-Percentile Queue Length [ft]	17.97	182.17	182.05	11.41	176.05	175.22	50.66	10.89	93.10	15.79
95th-Percentile Queue Length [veh]	1.29	11.71	11.71	0.82	11.39	11.35	3.65	0.78	6.70	1.14
95th-Percentile Queue Length [ft]	32.35	292.85	292.69	20.55	284.85	283.77	91.19	19.60	167.58	28.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.41	12.00	12.03	19.13	11.83	11.95	24.17	24.17	22.12	26.68	26.68	22.32
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.26			11.99			23.79			25.95		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.82											
Intersection LOS	B											
Intersection V/C	0.567											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1410	100	80	1350	240	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1410	100	80	1350	240	90
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	419	30	22	375	66	25
Total Analysis Volume [veh/h]	1676	119	89	1502	265	99
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.48	0.50	0.34	0.42	0.15	0.06
s, saturation flow rate [veh/h]	1863	1806	262	3547	1728	1560
c, Capacity [veh/h]	1337	1297	187	2547	310	280
d1, Uniform Delay [s]	6.89	7.10	23.79	6.20	35.71	32.28
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.70	3.05	8.42	1.01	6.65	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.67	0.69	0.48	0.59	0.85	0.35
d, Delay for Lane Group [s/veh]	9.59	10.15	32.21	7.21	42.36	33.04
Lane Group LOS	A	B	C	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	7.82	8.12	2.04	5.78	6.01	1.90
50th-Percentile Queue Length [ft]	195.52	203.10	50.99	144.53	150.30	47.39
95th-Percentile Queue Length [veh]	12.41	12.80	3.67	9.72	10.03	3.41
95th-Percentile Queue Length [ft]	310.18	319.96	91.78	243.12	250.82	85.30

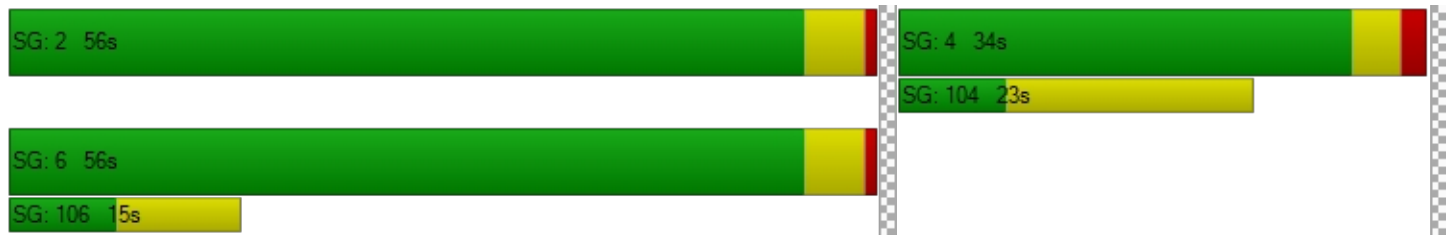


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.85	10.15	32.21	7.21	42.36	33.04
Movement LOS	A	B	C	A	D	C
d_A, Approach Delay [s/veh]	9.87		8.61		39.83	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	12.24					
Intersection LOS	B					
Intersection V/C	0.650					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	1020	60	40	1030	40	80	400	80	30	280	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1020	60	40	1030	40	80	400	80	30	280	30
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	284	17	10	261	10	21	104	21	9	83	9
Total Analysis Volume [veh/h]	22	1136	67	41	1045	41	83	416	83	35	331	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	28	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.46	0.46	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.04	0.32	0.32	0.09	0.29	0.29	0.35	0.24
s, saturation flow rate [veh/h]	528	1900	1851	472	1900	1865	1657	1671
c, Capacity [veh/h]	233	878	856	204	878	862	705	707
d1, Uniform Delay [s]	19.34	12.71	12.76	22.20	12.14	12.17	17.28	14.46
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.31	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	4.44	4.67	2.21	3.31	3.42	6.94	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

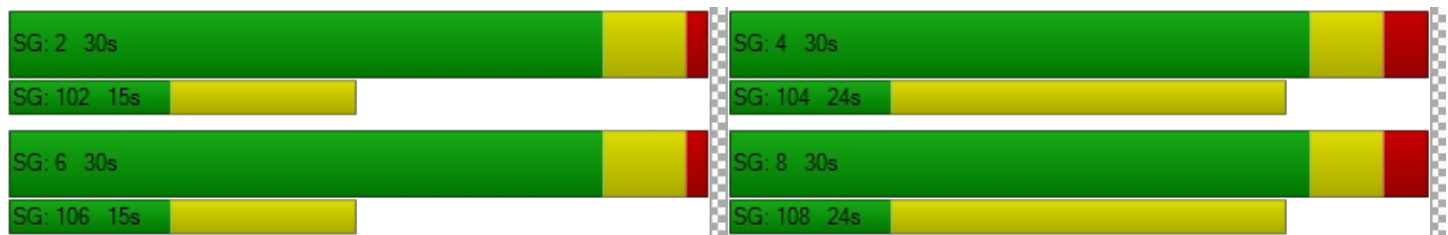
X, volume / capacity	0.09	0.69	0.70	0.20	0.62	0.63	0.83	0.57
d, Delay for Lane Group [s/veh]	20.15	17.15	17.43	24.40	15.45	15.59	24.22	15.29
Lane Group LOS	C	B	B	C	B	B	C	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.29	6.50	6.45	0.61	5.47	5.43	7.74	3.80
50th-Percentile Queue Length [ft]	7.17	162.52	161.21	15.27	136.67	135.69	193.60	95.12
95th-Percentile Queue Length [veh]	0.52	10.68	10.61	1.10	9.30	9.25	12.31	6.85
95th-Percentile Queue Length [ft]	12.90	267.06	265.33	27.48	232.54	231.21	307.69	171.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.15	17.28	17.43	24.40	15.52	15.59	24.22	24.22	24.22	15.29	15.29	15.29
Movement LOS	C	B	B	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	17.34			15.84			24.22			15.29		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	17.79											
Intersection LOS	B											
Intersection V/C	0.673											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	330	110	30	130	30	70	490	60	20	370	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	330	110	30	130	30	70	490	60	20	370	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	84	28	10	42	10	18	129	16	5	100	5
Total Analysis Volume [veh/h]	31	337	112	39	169	39	74	517	63	22	400	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	20	20	30	30
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.09	0.03	0.37	0.24
s, saturation flow rate [veh/h]	1226	1750	937	1863	1524	1747	1836
c, Capacity [veh/h]	407	595	184	634	518	952	993
d1, Uniform Delay [s]	18.06	17.58	27.16	14.37	13.41	11.33	9.57
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.97	0.57	0.22	0.06	4.03	1.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.75	0.21	0.27	0.08	0.69	0.45
d, Delay for Lane Group [s/veh]	18.14	19.55	27.73	14.60	13.47	15.37	11.03
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	5.09	0.54	1.55	0.33	6.22	3.37
50th-Percentile Queue Length [ft]	7.90	127.36	13.59	38.72	8.35	155.39	84.36
95th-Percentile Queue Length [veh]	0.57	8.80	0.98	2.79	0.60	10.30	6.07
95th-Percentile Queue Length [ft]	14.23	219.89	24.46	69.69	15.02	257.61	151.85

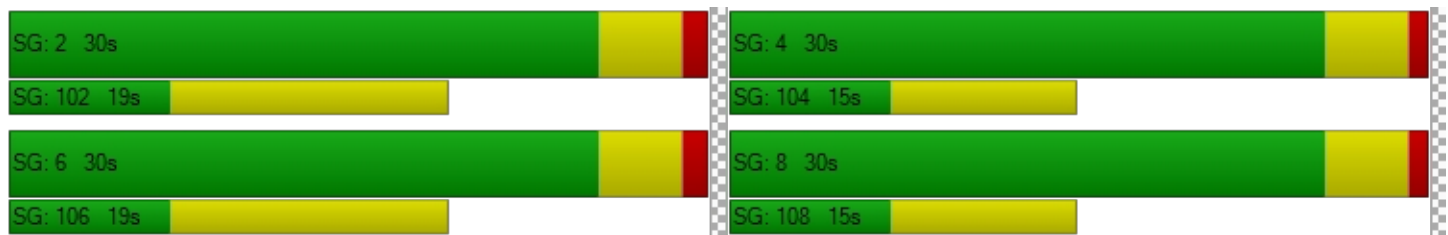


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.14	19.55	19.55	27.73	14.60	13.47	15.37	15.37	15.37	11.03	11.03	11.03
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.46			16.49			15.37			11.03		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.54											
Intersection LOS	B											
Intersection V/C	0.631											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	500	0	140	0	0	0	0	1400	620	50	1590	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	500	0	140	0	0	0	0	1400	620	50	1590	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	0	42	0	0	0	0	396	175	14	430	0
Total Analysis Volume [veh/h]	604	0	169	0	0	0	0	1583	701	54	1721	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	0	73	73	110	73	73	73
g / C, Green / Cycle	0.27	0.27	0.00	0.61	0.61	0.92	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.22	0.22	0.00	0.00	0.31	0.43	0.16	0.31	0.31
s, saturation flow rate [veh/h]	1810	1683	1863	281	5176	1615	328	3618	1900
c, Capacity [veh/h]	486	452	7	177	3170	1479	198	2216	1164
d1, Uniform Delay [s]	41.09	41.29	0.00	0.00	12.96	0.75	24.14	13.07	13.07
k, delay calibration	0.11	0.12	0.11	0.50	0.50	0.49	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.49	4.34	0.00	0.00	0.56	1.08	3.38	0.84	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

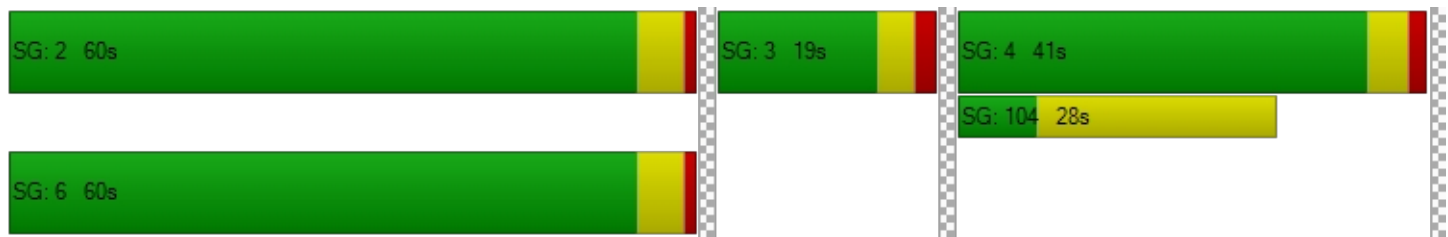
X, volume / capacity	0.82	0.83	0.00	0.00	0.50	0.47	0.27	0.51	0.51
d, Delay for Lane Group [s/veh]	44.57	45.63	0.00	0.00	13.52	1.83	27.52	13.91	14.67
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	11.39	10.93	0.00	0.00	7.61	0.44	1.23	8.29	8.95
50th-Percentile Queue Length [ft]	284.85	273.34	0.00	0.00	190.35	11.06	30.84	207.31	223.85
95th-Percentile Queue Length [veh]	16.93	16.36	0.00	0.00	12.14	0.80	2.22	13.01	13.86
95th-Percentile Queue Length [ft]	423.25	408.91	0.00	0.00	303.49	19.91	55.51	325.37	346.54

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.94	45.63	45.63	0.00	0.00	0.00	0.00	13.52	1.83	27.52	14.17	14.67
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.09			0.00			9.93			14.58		
Approach LOS	D			A			A			B		
d_I, Intersection Delay [s/veh]	17.26											
Intersection LOS	B											
Intersection V/C	0.535											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	21.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	280	90	0	230	30	10	160	80	10	110	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	280	90	0	230	30	10	160	80	10	110	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	80	26	0	72	9	3	49	25	3	35	6
Total Analysis Volume [veh/h]	23	322	103	0	289	38	12	196	98	13	138	25
Pedestrian Volume [ped/h]	10			5			6			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	574	546	535	496
Degree of Utilization, x	0.78	0.60	0.57	0.35

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	7.30	3.92	3.57	1.59
95th-Percentile Queue Length [ft]	182.60	98.03	89.17	39.67
Approach Delay [s/veh]	28.08	18.97	18.35	14.19
Approach LOS	D	C	C	B
Intersection Delay [s/veh]	21.39			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	580	640	30	60	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	580	640	30	60	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	161	167	8	19	6
Total Analysis Volume [veh/h]	11	645	668	31	74	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	11	11	11	3
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.15
(v / s)_j Volume / Saturation Flow Rate	0.01	0.34	0.35	0.02	0.06
s, saturation flow rate [veh/h]	778	1900	1900	1588	1756
c, Capacity [veh/h]	387	894	894	747	261
d1, Uniform Delay [s]	9.61	5.13	5.22	3.45	9.28
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.42	0.48	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

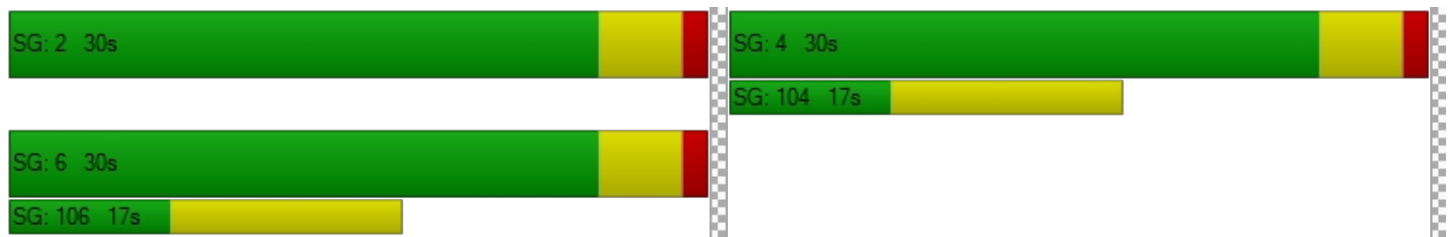
X, volume / capacity	0.03	0.72	0.75	0.04	0.38
d, Delay for Lane Group [s/veh]	9.62	5.54	5.70	3.46	9.62
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.03	0.73	0.78	0.02	0.35
50th-Percentile Queue Length [ft]	0.87	18.27	19.50	0.55	8.64
95th-Percentile Queue Length [veh]	0.06	1.32	1.40	0.04	0.62
95th-Percentile Queue Length [ft]	1.57	32.89	35.09	0.99	15.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.62	5.54	5.70	3.46	9.62	9.62
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.61		5.60		9.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.88					
Intersection LOS	A					
Intersection V/C	0.408					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	342	3	3	375	181	210	3	34
Total Analysis Volume [veh/h]	0	0	0	61	1369	10	10	1500	723	841	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		52	52	52	52	52	85	28	28
g / C, Green / Cycle		0.58	0.58	0.58	0.58	0.58	0.95	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate		0.17	0.36	0.36	0.03	0.41	0.45	0.24	0.09
s, saturation flow rate [veh/h]		355	1900	1895	391	3618	1615	3514	1600
c, Capacity [veh/h]		172	1109	1106	203	2111	1525	1103	502
d1, Uniform Delay [s]		29.85	12.22	12.22	21.62	13.29	0.25	27.75	23.20
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.66	2.64	2.65	0.46	2.06	1.06	1.12	0.31
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.36	0.62	0.62	0.05	0.71	0.47	0.76	0.29
d, Delay for Lane Group [s/veh]		35.52	14.85	14.87	22.08	15.35	1.31	28.87	23.51
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	10.41	10.40	0.17	9.94	0.45	7.91	2.26
50th-Percentile Queue Length [ft]		38.02	260.34	259.98	4.24	248.59	11.22	197.79	56.48
95th-Percentile Queue Length [veh]		2.74	15.71	15.69	0.30	15.11	0.81	12.52	4.07
95th-Percentile Queue Length [ft]		68.43	392.65	392.20	7.62	377.87	20.19	313.11	101.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.52	14.86	14.87	22.08	15.35	1.31	28.87	23.51	23.51
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			15.73			10.83			28.09		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.654											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	47.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.797

**Intersection Setup**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name				I-10 WB ON-OFF RAMPS			Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	320	280	420	0	230	670	0	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	320	280	420	0	230	670	0	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	84	73	109	0	60	176	0	18
Total Analysis Volume [veh/h]	0	0	0	0	335	293	438	0	240	702	0	73
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.19	0.18	0.24	0.13	0.37	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		35.91	15.67	35.31	4.51	22.14	14.62
k, delay calibration		0.19	0.29	0.47	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		20.68	0.91	82.17	0.29	9.52	0.29
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.96	0.39	1.12	0.18	0.83	0.10
d, Delay for Lane Group [s/veh]		56.59	16.58	117.48	4.80	31.66	14.91
Lane Group LOS		E	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		9.30	4.10	17.22	1.35	14.51	0.90
50th-Percentile Queue Length [ft]		232.55	102.49	430.46	33.70	362.87	22.51
95th-Percentile Queue Length [veh]		14.30	7.38	25.55	2.43	20.76	1.62
95th-Percentile Queue Length [ft]		357.60	184.49	638.84	60.65	519.07	40.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	56.59	16.58	117.48	0.00	4.80	31.66	0.00	14.91
Movement LOS					E	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			37.92			77.59			30.08		
Approach LOS	A			D			E			C		
d_I, Intersection Delay [s/veh]	47.93											
Intersection LOS	D											
Intersection V/C	0.797											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔			↔↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	110	220	160	90	80	10	60	1200	60	0	890	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	220	160	90	80	10	60	1200	60	0	890	60
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	61	44	25	22	3	17	332	17	0	258	17
Total Analysis Volume [veh/h]	122	243	177	100	89	11	66	1328	66	0	1033	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	55	55	55	55	55
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.61	0.61	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.11	0.14	0.13	0.10	0.06	0.14	0.29	0.29	0.33	0.34
s, saturation flow rate [veh/h]	1131	1676	1337	1001	1634	457	3192	1622	1676	1629
c, Capacity [veh/h]	325	483	385	222	471	260	1946	989	1022	993
d1, Uniform Delay [s]	30.98	26.67	26.28	36.85	24.29	19.35	9.64	9.68	10.22	10.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.72	0.81	0.85	1.44	0.22	2.34	0.83	1.65	2.04	2.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.38	0.50	0.46	0.45	0.21	0.25	0.47	0.48	0.54	0.56
d, Delay for Lane Group [s/veh]	31.69	27.48	27.13	38.29	24.51	21.70	10.47	11.33	12.26	12.61
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.35	4.34	3.13	2.15	1.61	1.12	4.69	5.05	6.25	6.37
50th-Percentile Queue Length [ft]	58.65	108.49	78.21	53.74	40.37	27.96	117.37	126.33	156.29	159.29
95th-Percentile Queue Length [veh]	4.22	7.76	5.63	3.87	2.91	2.01	8.25	8.74	10.35	10.51
95th-Percentile Queue Length [ft]	105.57	193.90	140.77	96.74	72.67	50.32	206.20	218.50	258.80	262.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.69	27.48	27.13	38.29	24.51	24.51	21.70	10.73	11.33	0.00	12.43	12.61
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	28.31			31.40			11.26			12.44		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.67											
Intersection LOS	B											
Intersection V/C	0.484											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.748

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	100	760	120	160	1250	100	150	710	80	70	650	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	760	120	160	1250	100	150	710	80	70	650	60
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	201	32	48	376	30	43	206	23	20	184	17
Total Analysis Volume [veh/h]	106	803	127	192	1504	120	174	823	93	79	734	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	36	36	46	37	37	35	27	27	35	23	23
g / C, Green / Cycle	0.51	0.40	0.40	0.51	0.41	0.41	0.39	0.30	0.30	0.39	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.19	0.23	0.08	0.12	0.42	0.08	0.18	0.25	0.25	0.10	0.21	0.22
s, saturation flow rate [veh/h]	557	3547	1558	1643	3547	1563	988	1900	1790	820	1900	1805
c, Capacity [veh/h]	261	1404	617	834	1456	642	366	564	532	296	488	464
d1, Uniform Delay [s]	20.18	21.25	17.90	12.37	26.56	16.95	21.40	29.51	29.74	20.68	31.66	31.85
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.24	0.25	0.11	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.65	1.70	0.75	0.64	32.42	0.64	4.37	6.68	8.38	0.48	6.14	7.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

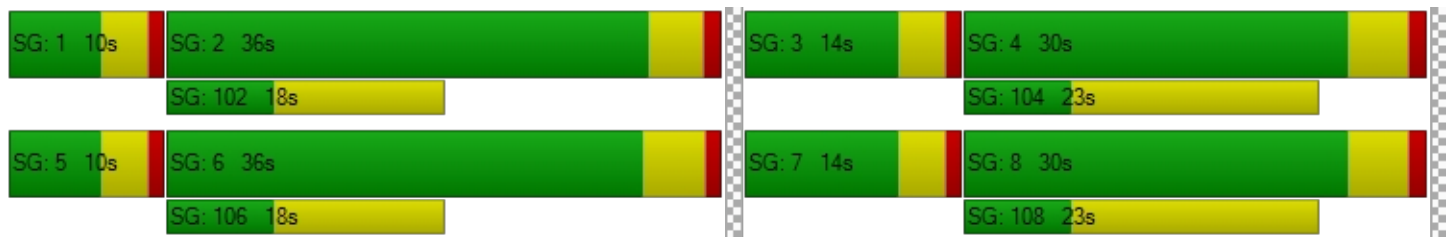
X, volume / capacity	0.41	0.57	0.21	0.23	1.03	0.19	0.47	0.83	0.85	0.27	0.83	0.85
d, Delay for Lane Group [s/veh]	24.83	22.95	18.65	13.01	58.97	17.60	25.77	36.19	38.12	21.16	37.80	39.47
Lane Group LOS	C	C	B	B	F	B	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.41	6.67	1.82	2.20	21.19	1.65	2.81	9.99	9.94	1.07	8.97	8.93
50th-Percentile Queue Length [ft]	35.29	166.70	45.44	54.95	529.63	41.34	70.26	249.69	248.42	26.81	224.27	223.25
95th-Percentile Queue Length [veh]	2.54	10.90	3.27	3.96	29.41	2.98	5.06	15.17	15.11	1.93	13.88	13.83
95th-Percentile Queue Length [ft]	63.53	272.57	81.79	98.90	735.23	74.41	126.47	379.26	377.66	48.25	347.07	345.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.83	22.95	18.65	13.01	58.97	17.60	25.77	37.03	38.12	21.16	38.54	39.47
Movement LOS	C	C	B	B	F	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	22.61			51.38			35.32			37.06		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	38.96											
Intersection LOS	D											
Intersection V/C	0.748											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	970	130	0	870	90	160	1070	120	70	800	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	970	130	0	870	90	160	1070	120	70	800	50
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	275	37	0	242	25	43	289	32	23	259	16
Total Analysis Volume [veh/h]	79	1098	147	0	970	100	173	1157	130	91	1035	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	46	46	46	46	46	46
g / C, Green / Cycle	0.39	0.39	0.39	0.39	0.39	0.51	0.51	0.51	0.51	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.15	0.34	0.35	0.20	0.21	0.33	0.32	0.09	0.19	0.29	0.30
s, saturation flow rate [veh/h]	530	1863	1767	3547	1724	520	3618	1506	484	1900	1843
c, Capacity [veh/h]	200	725	688	1380	671	217	1840	766	194	967	938
d1, Uniform Delay [s]	31.70	25.46	25.68	21.03	21.18	35.64	15.98	11.89	32.33	15.36	15.42
k, delay calibration	0.11	0.28	0.29	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	8.42	10.06	0.30	0.66	25.57	1.64	0.48	7.90	2.48	2.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.87	0.89	0.52	0.53	0.80	0.63	0.17	0.47	0.57	0.58
d, Delay for Lane Group [s/veh]	32.96	33.88	35.74	21.33	21.84	61.22	17.62	12.37	40.23	17.84	18.05
Lane Group LOS	C	C	D	C	C	E	B	B	D	B	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	1.60	13.62	13.52	5.60	5.71	5.37	8.39	1.44	2.22	7.85	7.76
50th-Percentile Queue Length [ft]	40.05	340.56	338.07	140.03	142.64	134.18	209.85	35.90	55.38	196.22	193.89
95th-Percentile Queue Length [veh]	2.88	19.68	19.55	9.48	9.62	9.17	13.15	2.59	3.99	12.44	12.32
95th-Percentile Queue Length [ft]	72.08	491.88	488.84	237.06	240.57	229.17	328.63	64.63	99.69	311.08	308.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.96	34.67	35.74	0.00	21.46	21.84	61.22	17.62	12.37	40.23	17.94	18.05
Movement LOS	C	C	D		C	C	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	34.69			21.50			22.32			19.65		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.76											
Intersection LOS	C											
Intersection V/C	0.679											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	60.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	150	1090	260	330	1240	150	160	1300	90	80	1000	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	1090	260	330	1240	150	160	1300	90	80	1000	100
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	310	74	89	333	40	42	341	24	23	293	29
Total Analysis Volume [veh/h]	170	1239	295	355	1332	161	168	1366	95	94	1173	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	52	12	40	58	9	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.44	0.10	0.33	0.49	0.08	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.09	0.24	0.19	0.10	0.26	0.11	0.09	0.38	0.07	0.05	0.32	0.08
s, saturation flow rate [veh/h]	1810	5074	1563	3445	5074	1499	1810	3618	1458	1774	3618	1499
c, Capacity [veh/h]	187	1628	731	356	1628	663	187	1205	717	138	1154	478
d1, Uniform Delay [s]	53.27	36.63	20.98	53.81	37.54	20.95	53.20	40.04	16.61	53.93	40.88	30.19
k, delay calibration	0.22	0.50	0.50	0.11	0.50	0.50	0.21	0.21	0.11	0.11	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	25.72	3.41	1.66	21.37	4.70	0.87	23.73	65.07	0.08	5.80	22.17	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.91	0.76	0.40	1.00	0.82	0.24	0.90	1.13	0.13	0.68	1.02	0.24
d, Delay for Lane Group [s/veh]	78.99	40.04	22.63	75.18	42.24	21.82	76.94	105.11	16.69	59.73	63.05	30.76
Lane Group LOS	E	D	C	E	D	C	E	F	B	E	F	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	6.36	11.19	5.67	6.40	12.61	3.00	6.19	28.16	1.42	2.97	20.15	2.56
50th-Percentile Queue Length [ft]	159.07	279.87	141.63	160.07	315.32	74.97	154.85	703.89	35.55	74.16	503.77	63.99
95th-Percentile Queue Length [veh]	10.50	16.68	9.57	10.55	18.44	5.40	10.28	39.96	2.56	5.34	27.81	4.61
95th-Percentile Queue Length [ft]	262.49	417.05	239.21	263.82	460.92	134.95	256.89	999.08	64.00	133.48	695.27	115.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	78.99	40.04	22.63	75.18	42.24	21.82	76.94	105.11	16.69	59.73	63.05	30.76
Movement LOS	E	D	C	E	D	C	E	F	B	E	F	C
d_A, Approach Delay [s/veh]	40.92			46.79			97.05			60.10		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	60.54											
Intersection LOS	E											
Intersection V/C	0.787											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	55.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.854

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	1000	390	760	1720
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1000	390	760	1720
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	278	109	201	456
Total Analysis Volume [veh/h]	0	0	1114	434	806	1824
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.35	0.31	0.50	0.57
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	13.48	12.65	29.72	0.29
k, delay calibration	0.50	0.50	0.39	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	2.72	226.88	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.63	0.55	1.49	0.60
d, Delay for Lane Group [s/veh]	15.15	15.37	256.61	1.19
Lane Group LOS	B	B	F	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.37	5.69	45.17	0.38
50th-Percentile Queue Length [ft]	184.36	142.15	1129.33	9.44
95th-Percentile Queue Length [veh]	11.83	9.60	69.49	0.68
95th-Percentile Queue Length [ft]	295.70	239.91	1737.15	17.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	15.15	15.37	256.61	1.19
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		15.21		79.46	
Approach LOS	A		B		E	
d_I, Intersection Delay [s/veh]	55.66					
Intersection LOS	E					
Intersection V/C	0.854					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	113.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.850

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	110	1690	130	80	1150	80	120	380	120	100	450	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1690	130	80	1150	80	120	380	120	100	450	100
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	498	38	22	316	22	32	100	32	27	123	27
Total Analysis Volume [veh/h]	130	1991	153	88	1265	88	126	400	126	109	490	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	41	0	15	56	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	52	52	52	29	29	29	29	29	29
g / C, Green / Cycle	0.42	0.42	0.42	0.57	0.57	0.57	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.33	0.62	0.11	0.17	0.40	0.07	0.18	0.13	0.09	0.13	0.18	0.19
s, saturation flow rate [veh/h]	393	3192	1407	511	3192	1351	718	3192	1328	861	1676	1492
c, Capacity [veh/h]	125	1342	592	324	1824	772	182	1044	434	261	548	488
d1, Uniform Delay [s]	43.33	26.21	17.04	17.99	13.77	8.89	39.94	23.43	22.64	32.28	25.11	25.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	91.23	221.46	1.06	2.06	2.20	0.30	4.60	0.23	0.37	1.07	0.91	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

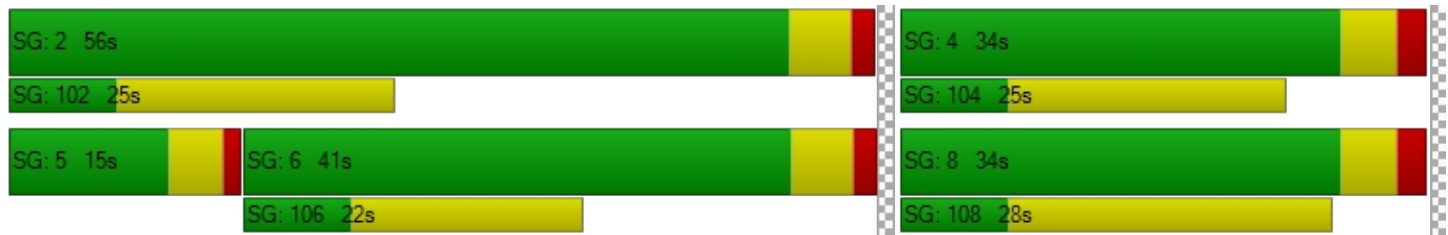
X, volume / capacity	1.04	1.48	0.26	0.27	0.69	0.11	0.69	0.38	0.29	0.42	0.56	0.60
d, Delay for Lane Group [s/veh]	134.55	247.68	18.10	20.05	15.96	9.19	44.54	23.66	23.01	33.35	26.02	26.62
Lane Group LOS	F	F	B	C	B	A	D	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.95	54.77	2.17	0.94	8.79	0.80	3.03	3.23	1.99	2.19	5.43	5.21
50th-Percentile Queue Length [ft]	148.66	1369.17	54.27	23.46	219.87	20.11	75.71	80.81	49.79	54.71	135.64	130.18
95th-Percentile Queue Length [veh]	10.17	84.13	3.91	1.69	13.66	1.45	5.45	5.82	3.59	3.94	9.25	8.95
95th-Percentile Queue Length [ft]	254.30	2103.29	97.69	42.22	341.46	36.20	136.27	145.46	89.63	98.47	231.15	223.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	134.55	247.68	18.10	20.05	15.96	9.19	44.54	23.66	23.01	33.35	26.24	26.62
Movement LOS	F	F	B	C	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	225.76			15.80			27.57			27.40		
Approach LOS	F			B			C			C		
d_I, Intersection Delay [s/veh]	113.01											
Intersection LOS	F											
Intersection V/C	0.850											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	100	1070	110	80	1000	110	70	480	90	70	450	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	1070	110	80	1000	110	70	480	90	70	450	40
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	296	30	21	257	28	21	147	28	20	126	11
Total Analysis Volume [veh/h]	111	1184	122	82	1026	113	86	589	110	79	506	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.25	0.27	0.27	0.22	0.24	0.24	0.11	0.35	0.08	0.11	0.33
s, saturation flow rate [veh/h]	443	3192	1591	378	3192	1585	768	1676	1406	741	1651
c, Capacity [veh/h]	209	1583	789	176	1583	786	146	705	591	126	694
d1, Uniform Delay [s]	33.52	19.22	19.25	35.09	18.34	18.38	49.53	28.47	20.04	51.54	27.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.31	0.04	0.04	0.28
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.34	1.38	2.78	8.59	1.04	2.12	1.39	7.35	0.06	1.89	5.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

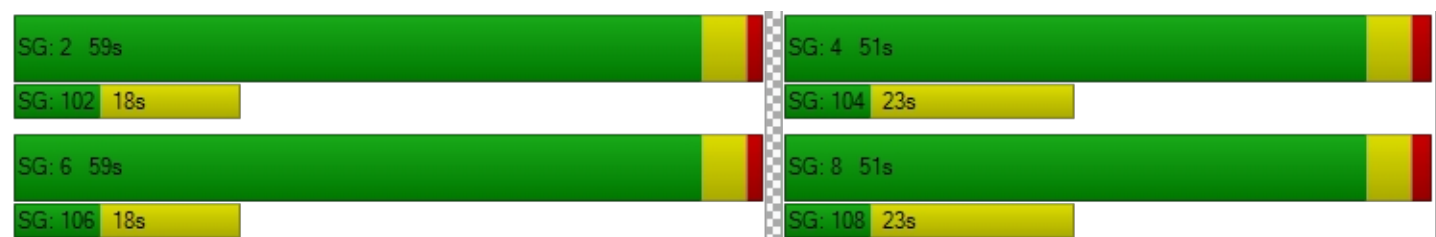
X, volume / capacity	0.53	0.55	0.55	0.47	0.48	0.48	0.59	0.84	0.19	0.63	0.79
d, Delay for Lane Group [s/veh]	42.86	20.60	22.03	43.68	19.39	20.50	50.92	35.82	20.09	53.44	32.92
Lane Group LOS	D	C	C	D	B	C	D	D	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	3.18	7.81	8.13	2.38	6.48	6.72	2.42	14.88	1.78	2.25	13.25
50th-Percentile Queue Length [ft]	79.42	195.17	203.29	59.55	161.97	168.00	60.56	371.99	44.39	56.31	331.15
95th-Percentile Queue Length [veh]	5.72	12.39	12.81	4.29	10.65	10.97	4.36	21.21	3.20	4.05	19.21
95th-Percentile Queue Length [ft]	142.96	309.73	320.20	107.20	266.33	274.28	109.00	530.15	79.90	101.36	480.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.86	20.98	22.03	43.68	19.68	20.50	50.92	35.82	20.09	53.44	32.92	32.92
Movement LOS	D	C	C	D	B	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	22.78			21.37			35.27			35.50		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	26.75											
Intersection LOS	C											
Intersection V/C	0.625											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	135.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.925

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	60	720	910	0	370	30	350	1030	140	50	1470	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	720	910	0	370	30	350	1030	140	50	1470	170
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	184	233	0	103	8	95	279	38	13	387	45
Total Analysis Volume [veh/h]	61	738	932	0	411	33	379	1116	152	53	1546	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	43	39	50	43	32	32	70	62	62	70	58	67
g / C, Green / Cycle	0.36	0.33	0.42	0.36	0.27	0.27	0.58	0.51	0.51	0.58	0.48	0.56
(v / s)_j Volume / Saturation Flow Rate	0.05	0.26	0.74	0.00	0.12	0.12	0.76	0.38	0.39	0.10	0.54	0.11
s, saturation flow rate [veh/h]	1138	2800	1252	750	1863	1812	497	1500	1824	554	2856	1581
c, Capacity [veh/h]	406	915	531	182	500	487	210	769	935	275	1373	896
d1, Uniform Delay [s]	26.88	36.95	35.35	0.00	36.50	36.54	45.57	22.90	23.20	17.93	31.18	12.70
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	1.74	346.87	0.00	0.63	0.66	380.46	6.19	5.54	1.56	66.76	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.81	1.75	0.00	0.45	0.45	1.80	0.74	0.75	0.19	1.13	0.20
d, Delay for Lane Group [s/veh]	27.05	38.69	382.22	0.00	37.13	37.20	426.03	29.09	28.74	19.49	97.94	13.20
Lane Group LOS	C	D	F	A	D	D	F	C	C	B	F	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.19	9.91	66.06	0.00	5.57	5.47	24.85	13.03	16.17	0.72	31.48	2.41
50th-Percentile Queue Length [ft]	29.80	247.81	1651.58	0.00	139.13	136.83	621.37	325.64	404.16	18.05	786.88	60.23
95th-Percentile Queue Length [veh]	2.15	15.08	105.48	0.00	9.43	9.31	44.26	18.94	22.76	1.30	44.40	4.34
95th-Percentile Queue Length [ft]	53.64	376.89	2636.91	0.00	235.86	232.75	1106.61	473.61	569.01	32.49	1110.09	108.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.05	38.69	382.22	0.00	37.16	37.20	426.03	28.92	28.74	19.49	97.94	13.20
Movement LOS	C	D	F	A	D	D	F	C	C	B	F	B
d_A, Approach Delay [s/veh]	223.24			37.16			120.28			87.07		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	134.97											
Intersection LOS	F											
Intersection V/C	0.925											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	270	80	30	100	50	20	860	50	80	790	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	270	80	30	100	50	20	860	50	80	790	20
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	75	22	9	30	15	5	229	13	25	245	6
Total Analysis Volume [veh/h]	22	299	89	36	120	60	21	915	53	99	979	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	56	56	56	56
g / C, Green / Cycle	0.27	0.27	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.26	0.19	0.32	0.32	0.45	0.45
s, saturation flow rate [veh/h]	1591	1142	1600	1489	937	1513
c, Capacity [veh/h]	475	358	1042	931	635	946
d1, Uniform Delay [s]	31.97	27.62	9.07	9.28	13.09	11.45
k, delay calibration	0.27	0.12	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.04	1.89	1.65	2.02	5.43	4.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.60	0.49	0.51	0.67	0.72
d, Delay for Lane Group [s/veh]	43.01	29.51	10.71	11.30	18.52	16.14
Lane Group LOS	D	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	9.89	4.01	5.07	4.92	6.84	8.96
50th-Percentile Queue Length [ft]	247.18	100.30	126.73	122.98	171.12	223.90
95th-Percentile Queue Length [veh]	15.04	7.22	8.76	8.56	11.14	13.86
95th-Percentile Queue Length [ft]	376.10	180.54	219.04	213.92	278.39	346.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.01	43.01	43.01	29.51	29.51	29.51	10.71	10.99	11.30	18.52	16.93	16.14
Movement LOS	D	D	D	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	43.01			29.51			11.00			17.05		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	19.75											
Intersection LOS	B											
Intersection V/C	0.709											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	41.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	800	570	0	10	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	800	570	0	10	40
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	230	164	0	4	14
Total Analysis Volume [veh/h]	0	921	656	0	14	56
Pedestrian Volume [ped/h]	4		4		28	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.12	0.13
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	41.34	14.47
Movement LOS		A	A		E	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.41	0.44
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	10.27	10.95
d_A, Approach Delay [s/veh]	0.00		0.00		19.84	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.84					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	59.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.978

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	500	490	0	250	200
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	500	490	0	250	200
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	141	139	0	83	67
Total Analysis Volume [veh/h]	0	562	557	0	333	267
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.98	0.46	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	59.11	10.44	0.00	0.00	0.00
Movement LOS		F	B		A	A
95th-Percentile Queue Length [veh]	0.00	13.76	2.46	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	343.89	61.59	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	59.11		10.44		0.00	
Approach LOS	F		B		A	
d_I, Intersection Delay [s/veh]	22.71					
Intersection LOS	F					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	18.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	50	440	10	10	280	10	0	0	0	20	10	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	440	10	10	280	10	0	0	0	20	10	30
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	139	3	3	79	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	63	558	13	11	317	11	0	0	0	27	13	40
Pedestrian Volume [ped/h]	35			23			5			6		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	789	743	569	615
Degree of Utilization, x	0.80	0.46	0.00	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	8.53	2.41	0.00	0.45
95th-Percentile Queue Length [ft]	213.22	60.16	0.00	11.14
Approach Delay [s/veh]	23.41	11.86	0.00	9.72
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	18.65			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	40	410	10	0	260	10	10	10	10	10	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	410	10	0	260	10	10	10	10	10	0	20
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	118	3	0	83	3	4	4	4	4	0	7
Total Analysis Volume [veh/h]	46	473	12	0	334	13	18	18	18	14	0	28
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	780	753	613	631
Degree of Utilization, x	0.68	0.46	0.09	0.07

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	5.44	2.45	0.29	0.21
95th-Percentile Queue Length [ft]	135.88	61.19	7.22	5.33
Approach Delay [s/veh]	16.83	11.81	9.44	9.11
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	14.30			
Intersection LOS	B			



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** San Vicente Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				4 1 0 0 2 0			4 1 0 0 2 0
		<i>NB--</i> 0		<i>SB--</i> 0	<i>NB--</i> 0		<i>SB--</i> 0
		<i>EB--</i> 0		<i>WB--</i> 0	<i>EB--</i> 0		<i>WB--</i> 0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	80	1	80	110	1	110
	↷ Left-Through		0			0	
	→ Through	160	1	160	350	1	350
	↷ Through-Right		0			0	
	↘ Right	120	1	50	150	1	80
	↷ Left-Through-Right		0			0	
	↶ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	280	1	280	210	1	210
	↶ Left-Through		0			0	
	→ Through	250	1	250	260	1	260
	↶ Through-Right		0			0	
	↘ Right	150	1	115	120	1	75
	↷ Left-Through-Right		0			0	
	↶ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	70	1	70	90	1	90
	↷ Left-Through		0			0	
	→ Through	850	2	425	680	2	340
	↷ Through-Right		0			0	
	↘ Right	90	1	50	70	1	15
	↷ Left-Through-Right		0			0	
	↶ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	140	1	140	140	1	140
	↷ Left-Through		0			0	
	→ Through	790	2	395	790	2	395
	↷ Through-Right		0			0	
	↘ Right	160	1	20	270	1	165
	↷ Left-Through-Right		0			0	
	↶ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 440 <i>East-West:</i> 565 <i>SUM:</i> 1005			<i>North-South:</i> 610 <i>East-West:</i> 485 <i>SUM:</i> 1095
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.731			0.796
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.631</b>			<b>0.696</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 2	<i>WB--</i> 2	2	<i>EB--</i> 2	<i>WB--</i> 2	2
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	10	0	10	30	0	30
	Left-Through		1			1	
	Through	90	0	100	100	0	130
	Through-Right		0			0	
	Right	10	1	0	30	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	180	0	180	110	0	110
	Left-Through		1			1	
	Through	80	0	260	90	0	200
	Through-Right		0			0	
	Right	20	1	5	40	1	20
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	30	1	30	40	1	40
	Left-Through		0			0	
	Through	1070	1	540	1230	1	625
	Through-Right		1			1	
	Right	10	0	10	20	0	20
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	1360	1	715	1320	1	705
	Through-Right		1			1	
	Right	70	0	70	90	0	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 280			<i>North-South:</i> 240
				<i>East-West:</i> 745			<i>East-West:</i> 745
				<i>SUM:</i> 1025			<i>SUM:</i> 985
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.683			0.657
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.583</b>			<b>0.557</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	160	1	160	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	100	1	100	90	1	90
	↵↔↘ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↘ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1140	1	630	1410	1	755
	↗ Through-Right		1			1	
	↘ Right	120	0	120	100	0	100
	↵↔↘ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	50	1	50	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1350	2	675	1350	2	675
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↘ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 160			<i>North-South:</i> 240
				<i>East-West:</i> 680			<i>East-West:</i> 835
				<i>SUM:</i> 840			<i>SUM:</i> 1075
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.560			0.717
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.460</b>			<b>0.617</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	100	0	100	80	0	80
	↵↔ Left-Through		0			0	
	→ Through	300	0	450	400	0	560
	↘ Through-Right		0			0	
	↘ Right	50	0	0	80	0	0
	↘↔ Left-Through-Right			1			1
	↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	0	30	30	0	30
	↵↔ Left-Through		0			0	
	→ Through	210	0	260	280	0	340
	↘ Through-Right		0			0	
	↘ Right	20	0	0	30	0	0
	↘↔ Left-Through-Right			1			1
	↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	20	1	20
	↵↔ Left-Through		0			0	
	→ Through	740	1	410	1020	1	540
	↘ Through-Right		1			1	
	↘ Right	80	0	80	60	0	60
	↘↔ Left-Through-Right			0			0
	↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	1260	1	655	1030	1	535
	↘ Through-Right		1			1	
	↘ Right	50	0	50	40	0	40
	↘↔ Left-Through-Right			0			0
	↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 480			<i>North-South:</i> 590
				<i>East-West:</i> 675			<i>East-West:</i> 580
				<b>SUM:</b> 1155			<b>SUM:</b> 1170
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.770			0.780
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.670</b>			<b>0.680</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Broadway

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	70	0	70
	Left-Through		0			0	
	Through	400	0	520	490	0	620
	Through-Right		0			0	
	Right	50	0	0	60	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	20	0	20	20	0	20
	Left-Through		0			0	
	Through	350	0	390	370	0	410
	Through-Right		0			0	
	Right	20	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	160	0	280	330	0	440
	Through-Right		1			1	
	Right	120	0	0	110	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	30	1	30	30	1	30
	Left-Through		0			0	
	Through	190	1	190	130	1	130
	Through-Right		0			0	
	Right	20	1	20	30	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		540	<i>North-South:</i>		640
		<i>East-West:</i>		310	<i>East-West:</i>		470
		<i>SUM:</i>		850	<i>SUM:</i>		1110
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.567			0.740
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.467</b>			<b>0.640</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



# Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	550	2	303	750	2	413
	↵↔ Left-Through		0			0	
	→ Through	10	0	60	10	0	120
	↵↔ Through-Right		1			1	
	↵ Right	50	0	0	110	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1020	1	515	1260	1	635
	↵↔ Through-Right		1			1	
	↵ Right	10	0	10	10	0	10
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	10	1	10	10	1	10
	↵↔ Left-Through		0			0	
	→ Through	1510	2	755	1410	2	705
	↵↔ Through-Right		0			0	
	↵ Right	690	1	387	680	1	267
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 303			<i>North-South:</i> 413
				<i>East-West:</i> 795			<i>East-West:</i> 775
				<b>SUM:</b> 1098			<b>SUM:</b> 1188
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.732			0.792
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.632</b>			<b>0.692</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	770	1	480	500	1	320
	↵↘ Left-Through		0			0	
	→ Through	0	0	480	0	0	320
	↘ Through-Right		0			0	
	↘ Right	190	0	0	140	0	0
	↘↵ Left-Through-Right		1			1	
	↘↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↘ Left	0	0	0	0	0	0
	↘↘ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↵ Left-Through-Right		1			1	
	↘↘ Left-Right		0			0	
<b>EASTBOUND</b>	↘ Left	0	1	0	0	1	0
	↘↘ Left-Through		0			0	
	→ Through	1230	3	410	1400	3	467
	↘ Through-Right		0			0	
	↘ Right	310	1	0	620	1	300
	↘↵ Left-Through-Right		0			0	
	↘↘ Left-Right		0			0	
<b>WESTBOUND</b>	↘ Left	140	1	140	50	1	50
	↘↘ Left-Through		0			0	
	→ Through	1430	2	477	1590	2	530
	↘ Through-Right		1			1	
	↘ Right	0	0	0	0	0	0
	↘↵ Left-Through-Right		0			0	
	↘↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 480			<i>North-South:</i> 320
				<i>East-West:</i> 550			<i>East-West:</i> 530
				<i>SUM:</i> 1030			<i>SUM:</i> 850
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.723			0.596
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.623</b>			<b>0.496</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 2	2	NB-- 2	SB-- 2	2
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	430	1	430	420	1	420
	↵↔ Left-Through		0			0	
	→ Through	520	1	520	230	1	230
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	350	1	350	670	1	670
	↘ Through-Right		0			0	
	↘ Right	80	1	80	70	1	70
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	630	1	630	320	1	320
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	340	1	0	280	1	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 780			<i>North-South:</i> 1090
				<i>East-West:</i> 630			<i>East-West:</i> 320
				<i>SUM:</i> 1410			<i>SUM:</i> 1410
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.989			0.989
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.889</b>			<b>0.889</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Texas Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	20	0	20
	Left-Through		1			1	
	Through	860	0	575	860	0	495
	Through-Right		1			1	
	Right	10	0	575	50	0	495
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	20	0	20	80	0	80
	Left-Through		1			1	
	Through	770	0	430	790	0	565
	Through-Right		1			1	
	Right	10	0	430	20	0	565
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	0	20	20	0	20
	Left-Through		0			0	
	Through	90	0	190	270	0	370
	Through-Right		0			0	
	Right	80	0	0	80	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	70	0	70	30	0	30
	Left-Through		0			0	
	Through	100	0	220	100	0	180
	Through-Right		0			0	
	Right	50	0	0	50	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 595			<i>North-South:</i> 585
				<i>East-West:</i> 260			<i>East-West:</i> 400
				<i>SUM:</i> 855			<i>SUM:</i> 985
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.570			0.657
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.470</b>			<b>0.557</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	220	1	220	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	620	1	370	710	1	395
	↗ Through-Right		1			1	
	↘ Right	120	0	120	80	0	80
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	640	1	360	650	1	355
	↗ Through-Right		1			1	
	↘ Right	80	0	80	60	0	60
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	1250	2	625	760	2	380
	↗ Through-Right		0			0	
	↘ Right	90	1	0	120	1	45
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	130	1	130	160	1	160
	↵↔ Left-Through		0			0	
	→ Through	1360	2	680	1250	2	625
	↗ Through-Right		0			0	
	↘ Right	80	1	25	100	1	65
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 580			<i>North-South:</i> 505
				<i>East-West:</i> 755			<i>East-West:</i> 725
				<b>SUM:</b> 1335			<b>SUM:</b> 1230
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.971			0.895
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.871</b>			<b>0.795</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	110	1	110	160	1	160
	↵↔ Left-Through		0			0	
	→ Through	870	2	435	1070	2	535
	↵↔ Through-Right		0			0	
	↵ Right	70	1	70	120	1	120
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	70	1	70	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	850	1	445	800	1	425
	↵↔ Through-Right		1			1	
	↵ Right	40	0	40	50	0	50
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	50	1	50	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	690	1	435	970	1	550
	↵↔ Through-Right		1			1	
	↵ Right	180	0	180	130	0	130
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	990	2	370	870	2	320
	↵↔ Through-Right		1			1	
	↵ Right	120	0	120	90	0	90
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 555			<i>North-South:</i> 605
				<i>East-West:</i> 435			<i>East-West:</i> 550
				<i>SUM:</i> 990			<i>SUM:</i> 1155
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.660			0.770
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.560</b>			<b>0.670</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2			2
				0			0
		<i>NB--</i> 0		<i>SB--</i> 0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 0		<i>WB--</i> 0	<i>EB--</i> 0	<i>WB--</i> 0	0
				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	1	70	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1000	2	350	1200	2	420
	↘ Through-Right		1			1	
	↘ Right	50	0	50	60	0	60
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1030	1	550	890	1	475
	↘ Through-Right		1			1	
	↘ Right	70	0	70	60	0	60
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	170	0	280	220	0	380
	↘ Through-Right		1			1	
	↘ Right	110	0	0	160	0	0
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	150	1	150	90	1	90
	↵↔ Left-Through		0			0	
	→ Through	210	1	210	80	1	80
	↘ Through-Right		0			0	
	↘ Right	10	1	10	10	1	10
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		620	<i>North-South:</i>		535
		<i>East-West:</i>		430	<i>East-West:</i>		470
		<i>SUM:</i>		1050	<i>SUM:</i>		1005
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.700			0.670
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.600</b>			<b>0.570</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
				4			4
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 3	<i>SB--</i> 1	1	<i>NB--</i> 3	<i>SB--</i> 1	1
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 3	<i>WB--</i> 3	3	<i>EB--</i> 3	<i>WB--</i> 3	3
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	290	1	290	160	1	160
	Left-Through		0			0	
	Through	1230	2	615	1300	2	650
	Through-Right		0			0	
	Right	240	1	124	90	1	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	160	1	160	80	1	80
	Left-Through		0			0	
	Through	1020	2	510	1000	2	500
	Through-Right		0			0	
	Right	140	1	0	100	1	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	160	1	160	150	1	150
	Left-Through		0			0	
	Through	900	3	300	1090	3	363
	Through-Right		0			0	
	Right	80	1	0	260	1	100
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	210	2	116	330	2	182
	Left-Through		0			0	
	Through	1240	3	413	1240	3	413
	Through-Right		0			0	
	Right	130	1	0	150	1	70
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 800			<i>North-South:</i> 730
				<i>East-West:</i> 573			<i>East-West:</i> 563
				<i>SUM:</i> 1373			<i>SUM:</i> 1293
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.999			0.940
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.899</b>			<b>0.840</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Ocean Park Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	830	1	830	350	1	350
	↵↔ Left-Through		0			0	
	→ Through	1620	1	860	1030	1	585
	↘ Through-Right		1			1	
	↘ Right	100	0	100	140	0	140
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	1	30	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	720	2	360	1470	2	735
	↘ Through-Right		0			0	
	↘ Right	290	1	280	170	1	140
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	330	2	165	720	2	360
	↘ Through-Right		0			0	
	↘ Right	300	1	0	910	1	735
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	60	1	60	0	1	0
	↵↔ Left-Through		0			0	
	→ Through	470	1	265	370	1	200
	↘ Through-Right		1			1	
	↘ Right	60	0	60	30	0	30
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1190			<i>North-South:</i> 1085
				<i>East-West:</i> 285			<i>East-West:</i> 735
				<i>SUM:</i> 1475			<i>SUM:</i> 1820
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.073			1.324
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.973</b>			<b>1.224</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>E</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** I-10 EB On-Ramp

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	2000	2	1000	1000	2	500
	↵↔ Through-Right		0			0	
	↵ Right	870	1	870	390	1	390
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	700	1	700	760	1	760
	↵↔ Left-Through		0			0	
	→ Through	1610	2	805	1720	2	860
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		1700	<i>North-South:</i>		1260
		<i>East-West:</i>		0	<i>East-West:</i>		0
		<b>SUM:</b>		1700	<b>SUM:</b>		1260
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.133			0.840
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>1.033</b>			<b>0.740</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>F</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	180	1	180	120	1	120
	Left-Through		0			0	
	Through	370	2	185	380	2	190
	Through-Right		0			0	
	Right	80	1	45	120	1	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	90	1	90	100	1	100
	Left-Through		0			0	
	Through	310	1	220	450	1	275
	Through-Right		1			1	
	Right	130	0	130	100	0	100
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	60	1	60	110	1	110
	Left-Through		0			0	
	Through	1720	2	860	1690	2	845
	Through-Right		0			0	
	Right	60	1	0	130	1	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	70	1	70	80	1	80
	Left-Through		0			0	
	Through	1510	2	755	1150	2	575
	Through-Right		0			0	
	Right	60	1	15	80	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 400			<i>North-South:</i> 395
				<i>East-West:</i> 930			<i>East-West:</i> 925
				<i>SUM:</i> 1330			<i>SUM:</i> 1320
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.933			0.926
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.833</b>			<b>0.826</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Interim Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	520	1	520	480	1	480
	↘ Through-Right		0			0	
	↘ Right	90	1	40	90	1	50
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	120	1	120	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	480	0	550	450	0	490
	↘ Through-Right		1			1	
	↘ Right	70	0	0	40	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	980	2	350	1070	2	393
	↘ Through-Right		1			1	
	↘ Right	70	0	70	110	0	110
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	100	1	100	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1230	2	433	1000	2	370
	↘ Through-Right		1			1	
	↘ Right	70	0	70	110	0	110
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 660			<i>North-South:</i> 560
				<i>East-West:</i> 503			<i>East-West:</i> 473
				<i>SUM:</i> 1163			<i>SUM:</i> 1033
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.775			0.689
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.675</b>			<b>0.589</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**INTERIM YEAR (2031) PLUS PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.810

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	113	366	30	92	50	213	390	80	20	380	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	113	366	30	92	50	213	390	80	20	380	120
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	31	99	8	25	13	60	110	22	5	103	33
Total Analysis Volume [veh/h]	43	123	397	32	99	54	239	438	90	22	413	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	58	27	27	31	51	51	3	23	23
g / C, Green / Cycle	0.30	0.65	0.30	0.30	0.34	0.56	0.56	0.03	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.42	0.26	0.31	0.04	0.13	0.23	0.06	0.01	0.22	0.11
s, saturation flow rate [veh/h]	396	1540	425	1528	1810	1900	1499	1643	1900	1181
c, Capacity [veh/h]	170	995	179	463	621	1068	842	54	478	297
d1, Uniform Delay [s]	27.50	7.59	25.98	22.66	22.37	11.23	9.19	42.66	32.20	28.32
k, delay calibration	0.50	0.23	0.36	0.04	0.50	0.50	0.50	0.04	0.12	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	62.36	0.56	17.61	0.04	1.80	1.17	0.26	1.82	5.33	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

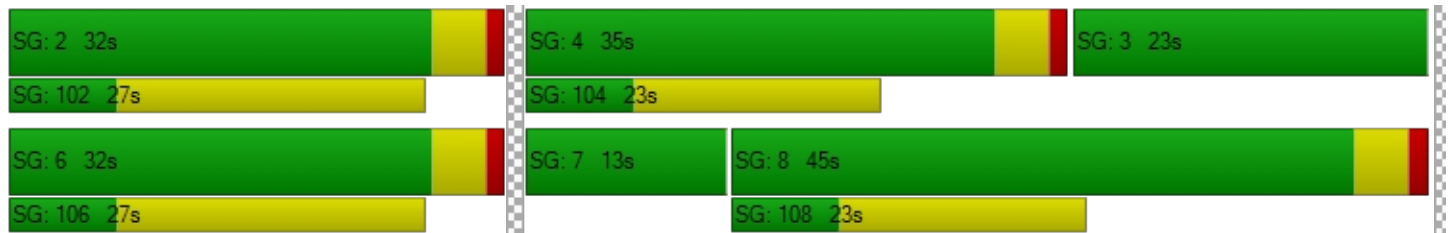
X, volume / capacity	0.97	0.40	0.73	0.12	0.38	0.41	0.11	0.41	0.86	0.44
d, Delay for Lane Group [s/veh]	89.86	8.16	43.59	22.70	24.18	12.39	9.45	44.48	37.52	28.70
Lane Group LOS	F	A	D	C	C	B	A	D	D	C
Critical Lane Group	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	5.64	3.47	2.88	0.81	4.04	4.95	0.83	0.50	9.06	2.34
50th-Percentile Queue Length [ft]	140.89	86.65	72.11	20.14	101.09	123.74	20.85	12.55	226.45	58.57
95th-Percentile Queue Length [veh]	9.53	6.24	5.19	1.45	7.28	8.60	1.50	0.90	13.99	4.22
95th-Percentile Queue Length [ft]	238.23	155.98	129.80	36.25	181.97	214.96	37.53	22.60	349.85	105.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	89.86	89.86	8.16	43.59	43.59	22.70	24.18	12.39	9.45	44.48	37.52	28.70
Movement LOS	F	F	A	D	D	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	32.25			37.49			15.72			35.76		
Approach LOS	C			D			B			D		
d_I, Intersection Delay [s/veh]	27.57											
Intersection LOS	C											
Intersection V/C	0.810											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.428

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	606	150	190	643	30	130	300	270	70	350	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	606	150	190	643	30	130	300	270	70	350	50
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	160	40	48	164	8	35	80	72	19	94	13
Total Analysis Volume [veh/h]	21	638	158	194	656	31	139	321	289	75	377	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	46	46	46	35	35	35	24	24	24
g / C, Green / Cycle	0.37	0.37	0.37	0.51	0.51	0.51	0.39	0.39	0.39	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.03	0.18	0.11	0.19	0.18	0.02	0.12	0.17	0.19	0.07	0.12	0.12
s, saturation flow rate [veh/h]	774	3618	1491	1022	3618	1484	1196	1900	1543	1057	1900	1796
c, Capacity [veh/h]	272	1353	558	534	1832	751	487	744	604	199	503	475
d1, Uniform Delay [s]	26.21	21.43	19.74	13.28	13.40	11.20	18.64	20.07	20.52	38.17	27.53	27.61
k, delay calibration	0.50	0.50	0.50	0.47	0.50	0.50	0.13	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	1.18	1.27	1.81	0.55	0.10	0.38	0.15	0.22	0.44	0.22	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.47	0.28	0.36	0.36	0.04	0.29	0.43	0.48	0.38	0.44	0.45
d, Delay for Lane Group [s/veh]	26.76	22.61	21.01	15.09	13.95	11.31	19.01	20.22	20.74	38.60	27.75	27.85
Lane Group LOS	C	C	C	B	B	B	B	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.39	5.17	2.46	2.28	3.84	0.31	1.91	4.80	4.42	1.56	3.82	3.70
50th-Percentile Queue Length [ft]	9.65	129.30	61.39	56.88	95.98	7.85	47.70	119.88	110.59	39.11	95.39	92.53
95th-Percentile Queue Length [veh]	0.69	8.90	4.42	4.10	6.91	0.56	3.43	8.39	7.87	2.82	6.87	6.66
95th-Percentile Queue Length [ft]	17.37	222.54	110.49	102.39	172.76	14.12	85.87	209.67	196.82	70.40	171.71	166.55

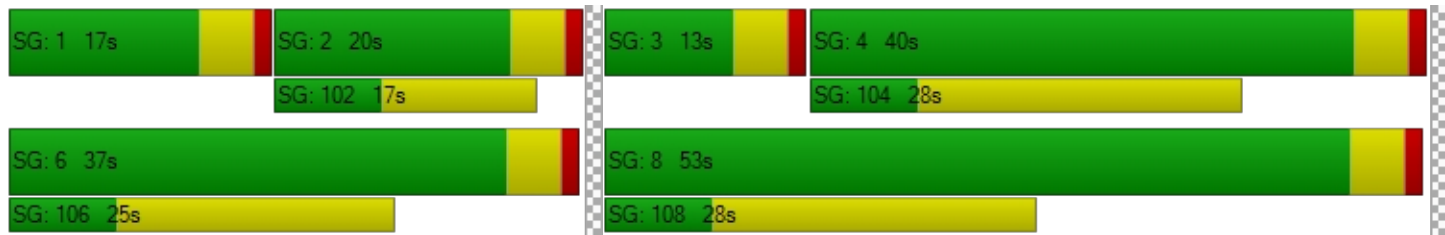


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.76	22.61	21.01	15.09	13.95	11.31	19.01	20.22	20.74	38.60	27.79	27.85
Movement LOS	C	C	C	B	B	B	B	C	C	D	C	C
d_A, Approach Delay [s/veh]	22.41			14.11			20.20			29.40		
Approach LOS	C			B			C			C		
d_I, Intersection Delay [s/veh]	20.57											
Intersection LOS	C											
Intersection V/C	0.428											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.316

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	78	60	30	94	30	80	700	70	10	700	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	78	60	30	94	30	80	700	70	10	700	10
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	23	18	10	30	10	21	183	18	3	187	3
Total Analysis Volume [veh/h]	12	93	71	38	119	38	83	730	73	11	749	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	52	52	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.65	0.57	0.57	0.65	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.06	0.05	0.03	0.09	0.09	0.21	0.22	0.01	0.20	0.20
s, saturation flow rate [veh/h]	1831	1486	1244	1713	882	1900	1784	773	1900	1884
c, Capacity [veh/h]	507	375	315	432	599	1091	1025	530	998	990
d1, Uniform Delay [s]	26.62	26.41	30.53	27.69	6.74	10.38	10.47	6.47	12.67	12.68
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.09	0.06	0.19	0.04	0.98	1.10	0.07	1.11	1.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

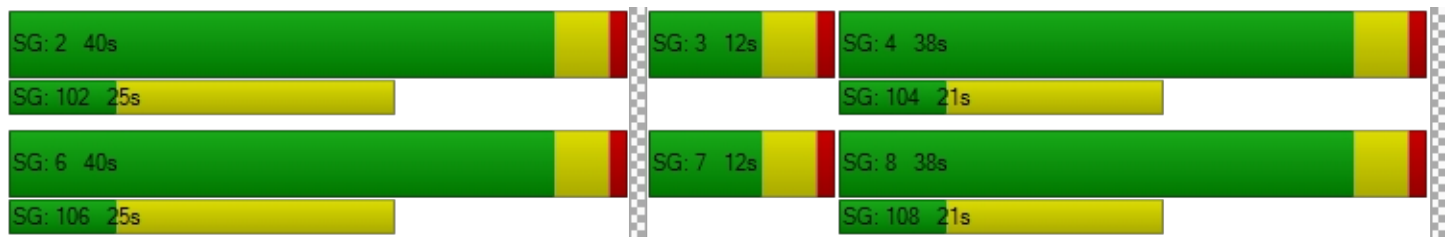
X, volume / capacity	0.21	0.19	0.12	0.36	0.14	0.37	0.39	0.02	0.38	0.38
d, Delay for Lane Group [s/veh]	26.70	26.50	30.59	27.88	6.78	11.36	11.56	6.54	13.78	13.81
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.74	1.17	0.68	2.71	0.53	4.32	4.24	0.08	4.58	4.57
50th-Percentile Queue Length [ft]	43.54	29.27	16.95	67.87	13.18	107.99	106.07	1.92	114.55	114.17
95th-Percentile Queue Length [veh]	3.13	2.11	1.22	4.89	0.95	7.73	7.62	0.14	8.09	8.07
95th-Percentile Queue Length [ft]	78.37	52.68	30.52	122.17	23.72	193.21	190.52	3.46	202.32	201.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.70	26.70	26.50	30.59	27.88	27.88	6.78	11.45	11.56	6.54	13.79	13.81
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.62			28.41			11.02			13.69		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.06											
Intersection LOS	B											
Intersection V/C	0.316											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	287	80	104	324	70	110	730	185	80	620	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	287	80	104	324	70	110	730	185	80	620	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	83	23	29	91	20	29	190	48	22	169	3
Total Analysis Volume [veh/h]	12	332	93	117	363	79	115	762	193	87	678	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.22	0.22	0.22	0.34	0.34	0.34	0.55	0.43	0.43	0.55	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.01	0.11	0.12	0.10	0.19	0.05	0.12	0.26	0.27	0.11	0.18	0.18
s, saturation flow rate [veh/h]	1005	1900	1667	1228	1900	1504	958	1900	1719	812	1900	1886
c, Capacity [veh/h]	121	413	362	433	651	515	554	825	747	444	819	813
d1, Uniform Delay [s]	41.98	31.19	31.52	21.44	24.07	20.55	10.38	19.49	19.69	11.74	17.84	17.84
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.39	0.53	0.12	0.28	0.05	0.25	3.20	3.79	0.98	1.59	1.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.53	0.57	0.27	0.56	0.15	0.21	0.60	0.62	0.20	0.42	0.42
d, Delay for Lane Group [s/veh]	42.11	31.58	32.05	21.57	24.35	20.61	10.63	22.68	23.49	12.72	19.43	19.45
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	4.16	3.99	1.71	6.13	1.14	1.05	8.26	7.88	0.88	5.16	5.14
50th-Percentile Queue Length [ft]	6.52	103.93	99.78	42.75	153.30	28.43	26.30	206.58	196.95	21.90	129.04	128.47
95th-Percentile Queue Length [veh]	0.47	7.48	7.18	3.08	10.19	2.05	1.89	12.98	12.48	1.58	8.89	8.86
95th-Percentile Queue Length [ft]	11.73	187.07	179.60	76.95	254.82	51.18	47.34	324.44	312.03	39.41	222.19	221.42

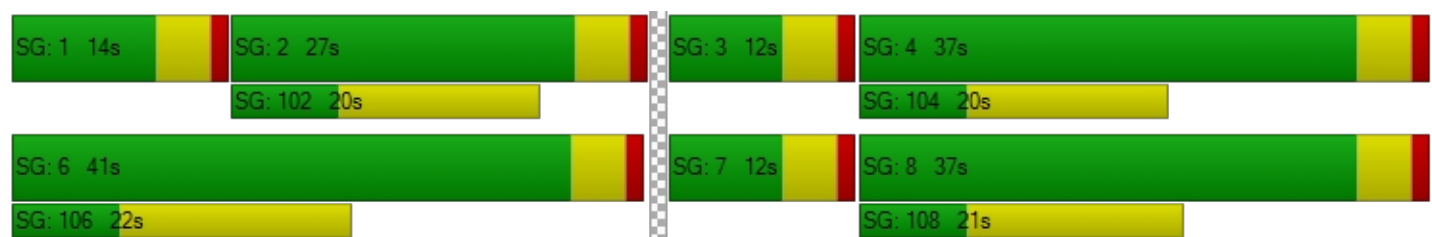


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.11	31.74	32.05	21.57	24.35	20.61	10.63	22.97	23.49	12.72	19.44	19.45
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.09			23.24			21.73			18.69		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.79											
Intersection LOS	C											
Intersection V/C	0.485											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	70	290	100	100	270	60	100	945	150	30	744	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	290	100	100	270	60	100	945	150	30	744	40
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	73	25	28	75	17	27	251	40	8	205	11
Total Analysis Volume [veh/h]	71	294	101	111	299	66	106	1005	160	33	820	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	7	34	34	7	46	46	35	35	35
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.52	0.52	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.07	0.15	0.07	0.06	0.16	0.04	0.06	0.31	0.33	0.07	0.23	0.23
s, saturation flow rate [veh/h]	1046	1900	1434	1810	1900	1486	1810	1900	1747	490	1900	1848
c, Capacity [veh/h]	199	480	362	142	725	567	137	981	902	144	740	720
d1, Uniform Delay [s]	37.96	29.78	27.08	40.78	20.44	18.02	40.89	15.36	15.65	36.45	21.79	21.86
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.48	0.15	3.57	0.14	0.03	3.51	2.79	3.36	3.67	3.42	3.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

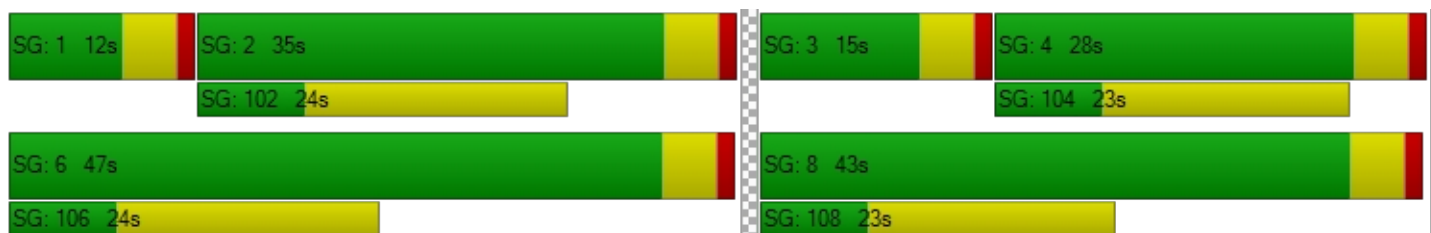
X, volume / capacity	0.36	0.61	0.28	0.78	0.41	0.12	0.77	0.61	0.63	0.23	0.59	0.59
d, Delay for Lane Group [s/veh]	38.36	30.26	27.24	44.35	20.58	18.05	44.40	18.15	19.01	40.12	25.22	25.45
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.47	5.48	1.71	2.50	4.41	0.86	2.41	8.76	8.64	0.81	7.71	7.62
50th-Percentile Queue Length [ft]	36.81	136.96	42.68	62.51	110.21	21.45	60.33	219.07	216.10	20.35	192.80	190.59
95th-Percentile Queue Length [veh]	2.65	9.32	3.07	4.50	7.85	1.54	4.34	13.62	13.47	1.46	12.27	12.15
95th-Percentile Queue Length [ft]	66.26	232.92	76.82	112.52	196.29	38.60	108.59	340.44	336.64	36.62	306.65	303.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.36	30.26	27.24	44.35	20.58	18.05	44.40	18.50	19.01	40.12	25.33	25.45
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	30.84			25.77			20.72			25.88		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.50											
Intersection LOS	C											
Intersection V/C	0.542											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└└			┌└└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	90	100	66	90	30	10	1225	190	10	994	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	90	100	66	90	30	10	1225	190	10	994	10
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	29	32	18	31	10	3	328	51	3	263	3
Total Analysis Volume [veh/h]	7	116	129	70	124	41	11	1312	204	11	1050	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	49	49	2	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.54	0.54	0.02	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.28	0.01	0.41	0.42	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1693	600	1810	1900	1783	1810	1900	1889
c, Capacity [veh/h]	478	170	36	1034	970	36	1034	1028
d1, Uniform Delay [s]	27.08	31.94	43.49	15.72	16.07	43.49	12.98	12.99
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.32	45.20	1.77	4.87	5.84	1.77	1.83	1.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.51	0.97	0.31	0.74	0.77	0.31	0.51	0.52
d, Delay for Lane Group [s/veh]	27.39	77.14	45.26	20.59	21.91	45.26	14.80	14.83
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.35	5.55	0.26	12.40	12.46	0.26	6.79	6.77
50th-Percentile Queue Length [ft]	108.87	138.87	6.43	309.92	311.57	6.43	169.73	169.35
95th-Percentile Queue Length [veh]	7.78	9.42	0.46	18.17	18.25	0.46	11.06	11.04
95th-Percentile Queue Length [ft]	194.42	235.50	11.57	454.28	456.31	11.57	276.56	276.06

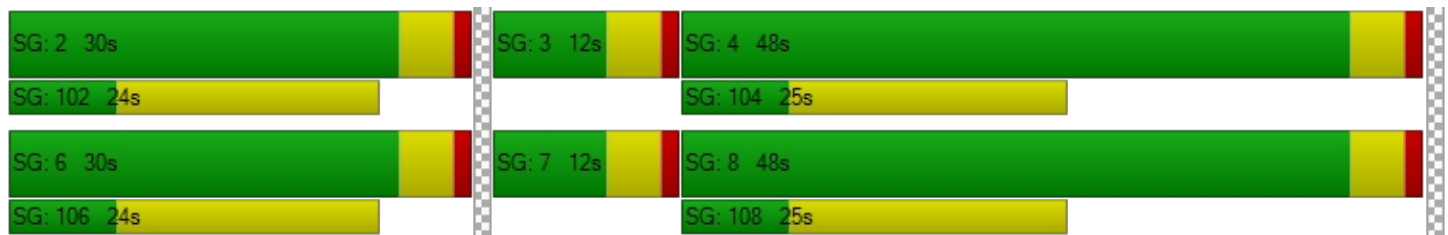


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.39	27.39	0.00	77.14	77.14	45.26	21.14	21.91	45.26	14.82	14.83
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	27.39			77.14			21.42			15.13		
Approach LOS	C			E			C			B		
d_I, Intersection Delay [s/veh]	22.72											
Intersection LOS	C											
Intersection V/C	0.699											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	71.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.852

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	640	270	750	220	685	0	0	1194	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	640	270	750	220	685	0	0	1194	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	163	69	191	57	178	0	0	308	10
Total Analysis Volume [veh/h]	0	0	0	653	275	765	228	711	0	0	1233	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	13	50	33	33
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.15	0.56	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.49	0.24	0.26	0.47	0.13	0.20	0.23	0.23
s, saturation flow rate [veh/h]	900	1856	1463	900	1810	3618	3618	1855
c, Capacity [veh/h]	304	627	494	304	264	2026	1312	673
d1, Uniform Delay [s]	29.80	26.00	26.76	29.80	37.53	10.84	23.88	23.70
k, delay calibration	0.50	0.19	0.24	0.50	0.08	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	222.2	2.60	5.75	189.5	5.97	0.48	2.48	4.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

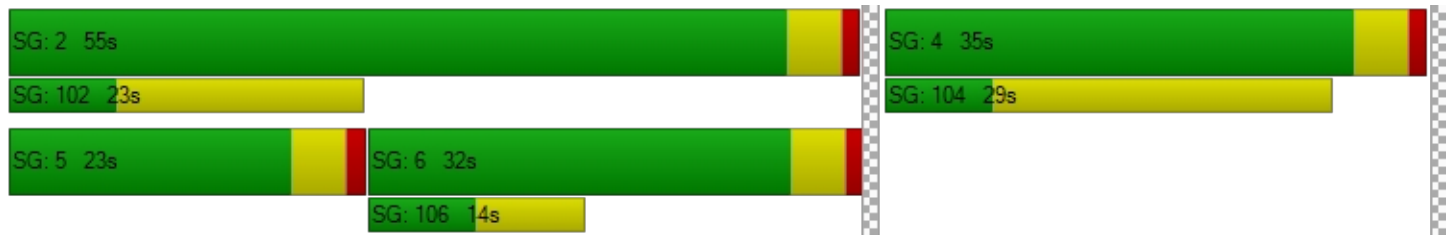
X, volume / capacity	1.46	0.71	0.78	1.38	0.86	0.35	0.65	0.63
d, Delay for Lane Group [s/veh]	252.0	28.60	32.51	219.3	43.50	11.32	26.36	28.16
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	24.73	8.11	7.55	21.97	5.25	3.73	7.69	8.02
50th-Percentile Queue Length [ft]	618.3	202.8	188.8	549.1	131.36	93.14	192.29	200.48
95th-Percentile Queue Length [veh]	39.87	12.79	12.06	35.16	9.01	6.71	12.24	12.66
95th-Percentile Queue Length [ft]	996.7	319.6	301.5	878.9	225.35	167.66	306.00	316.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	172.85	29.14	139.86	43.50	11.32	0.00	0.00	26.92	28.16
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			135.08			19.14			26.96		
Approach LOS	A			F			B			C		
d_I, Intersection Delay [s/veh]	71.94											
Intersection LOS	E											
Intersection V/C	0.852											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌						⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	170	380	250	0	0	0	0	745	680	810	1024	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	380	250	0	0	0	0	745	680	810	1024	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	122	80	0	0	0	0	202	184	218	275	0
Total Analysis Volume [veh/h]	218	487	320	0	0	0	0	808	737	870	1100	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21		26	26	26	29	60
g / C, Green / Cycle	0.23	0.23	0.23		0.29	0.29	0.29	0.32	0.67
(v / s)_j Volume / Saturation Flow Rate	0.20	0.20	0.20		0.21	0.26	0.26	0.25	0.30
s, saturation flow rate [veh/h]	1845	1729	1563		3618	1493	1493	3514	3618
c, Capacity [veh/h]	428	402	363		1055	435	435	1135	2408
d1, Uniform Delay [s]	33.08	33.08	33.39		28.74	30.49	30.49	27.44	7.24
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	1.97	2.82		0.37	2.49	2.49	4.97	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.85	0.88		0.73	0.89	0.89	0.77	0.46
d, Delay for Lane Group [s/veh]	34.93	35.05	36.20		29.11	32.98	32.98	32.41	7.86
Lane Group LOS	C	D	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.52	7.06	6.76		7.23	7.92	7.92	8.90	4.53
50th-Percentile Queue Length [ft]	188.01	176.53	169.07		180.80	197.90	197.90	222.46	113.34
95th-Percentile Queue Length [veh]	12.02	11.42	11.03		11.64	12.53	12.53	13.79	8.03
95th-Percentile Queue Length [ft]	300.44	285.48	275.69		291.05	313.25	313.25	344.77	200.63

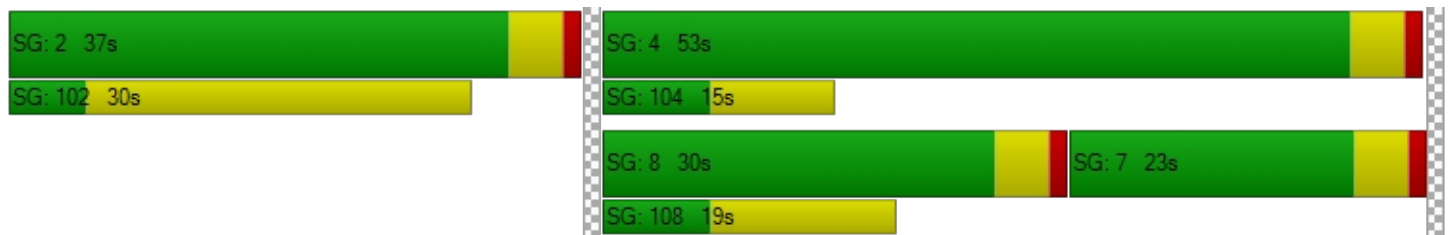


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.93	35.01	36.20	0.00	0.00	0.00	0.00	29.11	32.98	32.41	7.86	0.00
Movement LOS	C	D	D					C	C	C	A	
d_A, Approach Delay [s/veh]	35.37			0.00			31.05			18.70		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	26.67											
Intersection LOS	C											
Intersection V/C	0.711											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	48.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.774

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	150	470	120	180	360	70	120	1125	90	90	974	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	470	120	180	360	70	120	1125	90	90	974	70
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	120	31	52	105	20	34	315	25	26	285	20
Total Analysis Volume [veh/h]	153	479	122	209	418	81	134	1259	101	105	1138	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	33	33	14	35	35	11	49	49	5	44	44
g / C, Green / Cycle	0.10	0.27	0.27	0.12	0.29	0.29	0.09	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.08	0.25	0.08	0.12	0.13	0.14	0.07	0.35	0.06	0.06	0.31	0.05
s, saturation flow rate [veh/h]	1810	1900	1565	1810	1900	1775	1810	3618	1565	1810	3618	1571
c, Capacity [veh/h]	181	515	424	218	554	518	161	1488	644	82	1331	578
d1, Uniform Delay [s]	53.13	42.65	34.59	52.48	34.79	34.88	53.82	31.89	22.23	57.31	34.99	25.30
k, delay calibration	0.04	0.29	0.11	0.33	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.15	17.57	0.37	39.83	0.60	0.66	4.71	6.10	0.52	134.05	7.19	0.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

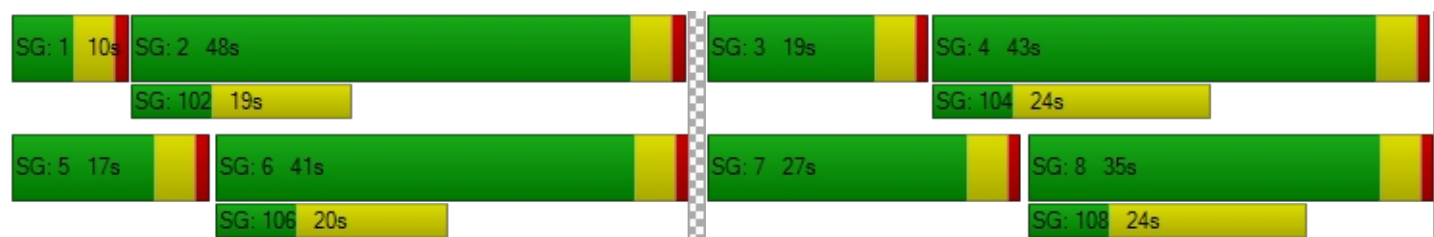
X, volume / capacity	0.85	0.93	0.29	0.96	0.46	0.47	0.83	0.85	0.16	1.28	0.86	0.14
d, Delay for Lane Group [s/veh]	57.28	60.22	34.96	92.31	35.40	35.54	58.53	37.99	22.75	191.35	42.18	25.82
Lane Group LOS	E	E	C	F	D	D	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.70	16.09	2.85	8.61	6.16	5.86	4.16	17.20	1.88	5.52	16.24	1.64
50th-Percentile Queue Length [ft]	117.62	402.23	71.21	215.17	154.01	146.58	103.93	429.97	46.88	137.94	405.95	40.91
95th-Percentile Queue Length [veh]	8.26	22.67	5.13	13.42	10.23	9.83	7.48	24.00	3.38	9.93	22.85	2.95
95th-Percentile Queue Length [ft]	206.55	566.69	128.17	335.46	255.77	245.86	187.07	600.01	84.38	248.30	571.17	73.64

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.28	60.22	34.96	92.31	35.45	35.54	58.53	37.99	22.75	191.35	42.18	25.82
Movement LOS	E	E	C	F	D	D	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.54			52.25			38.80			52.99		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	48.36											
Intersection LOS	D											
Intersection V/C	0.774											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	30	603	40	111	437	50	50	390	61	90	370	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	603	40	111	437	50	50	390	61	90	370	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	160	11	30	118	13	15	116	18	25	101	11
Total Analysis Volume [veh/h]	32	641	42	120	471	54	60	465	73	98	405	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	30	30	30	30	30
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.18	0.18	0.16	0.14	0.14	0.06	0.24	0.05	0.10	0.24
s, saturation flow rate [veh/h]	890	1900	1852	767	1900	1823	955	1900	1570	941	1861
c, Capacity [veh/h]	462	971	946	390	971	932	218	711	587	212	696
d1, Uniform Delay [s]	14.05	11.68	11.70	17.60	11.12	11.14	32.03	20.74	16.43	33.82	20.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	1.02	1.05	2.04	0.70	0.74	0.25	0.52	0.03	0.58	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.36	0.36	0.31	0.27	0.28	0.28	0.65	0.12	0.46	0.64
d, Delay for Lane Group [s/veh]	14.34	12.70	12.75	19.64	11.82	11.88	32.28	21.26	16.47	34.40	21.09
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.37	3.65	3.59	1.74	2.67	2.60	1.05	6.74	0.83	1.81	6.46
50th-Percentile Queue Length [ft]	9.28	91.18	89.66	43.48	66.80	64.98	26.18	168.39	20.77	45.18	161.53
95th-Percentile Queue Length [veh]	0.67	6.56	6.46	3.13	4.81	4.68	1.88	10.99	1.50	3.25	10.63
95th-Percentile Queue Length [ft]	16.71	164.12	161.38	78.27	120.24	116.96	47.12	274.80	37.38	81.32	265.74



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.34	12.72	12.75	19.64	11.85	11.88	32.28	21.26	16.47	34.40	21.09	21.09
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	12.80			13.30			21.78			23.47		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.40											
Intersection LOS	B											
Intersection V/C	0.427											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	140	590	10	30	500	40	140	444	40	40	292	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	590	10	30	500	40	140	444	40	40	292	90
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	165	3	8	136	11	40	128	12	11	79	24
Total Analysis Volume [veh/h]	156	659	11	33	545	44	161	511	46	44	318	98
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	33	33	33	33	33
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.19	0.18	0.18	0.04	0.16	0.16	0.15	0.30	0.05	0.17	0.06
s, saturation flow rate [veh/h]	839	1900	1887	779	1900	1840	1076	1865	866	1900	1571
c, Capacity [veh/h]	433	1015	1008	398	1015	983	313	678	145	691	571
d1, Uniform Delay [s]	18.51	11.86	11.86	16.44	11.58	11.60	32.47	25.99	40.59	21.89	19.44
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.16	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.32	0.87	0.88	0.41	0.73	0.77	0.49	3.62	0.44	0.18	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

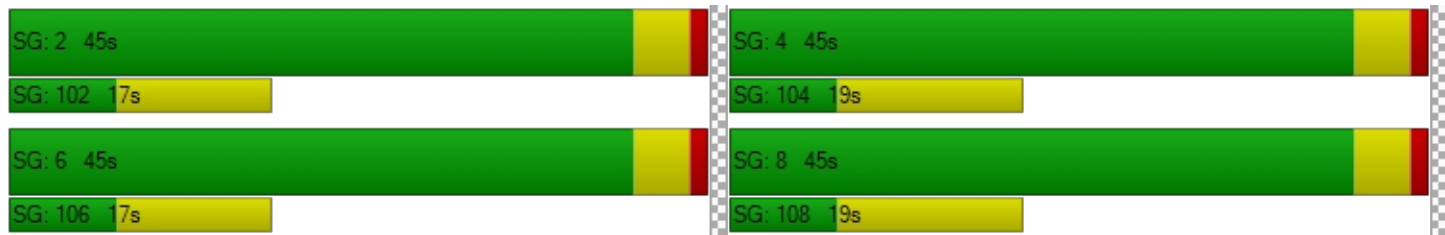
X, volume / capacity	0.36	0.33	0.33	0.08	0.29	0.30	0.51	0.82	0.30	0.46	0.17
d, Delay for Lane Group [s/veh]	20.83	12.74	12.75	16.85	12.31	12.37	32.96	29.61	41.03	22.07	19.49
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.46	3.74	3.72	0.45	3.23	3.17	3.16	10.83	0.94	4.92	1.34
50th-Percentile Queue Length [ft]	61.48	93.43	92.97	11.20	80.72	79.19	78.94	270.80	23.62	122.89	33.60
95th-Percentile Queue Length [veh]	4.43	6.73	6.69	0.81	5.81	5.70	5.68	16.23	1.70	8.55	2.42
95th-Percentile Queue Length [ft]	110.66	168.18	167.35	20.17	145.29	142.55	142.10	405.74	42.52	213.79	60.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.83	12.74	12.75	16.85	12.34	12.37	32.96	29.61	29.61	41.03	22.07	19.49
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	14.27			12.58			30.36			23.33		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.86											
Intersection LOS	B											
Intersection V/C	0.485											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	460	50	20	490	50	60	123	60	40	136	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	460	50	20	490	50	60	123	60	40	136	40
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	125	14	6	145	15	17	35	17	12	41	12
Total Analysis Volume [veh/h]	32	498	54	24	580	59	68	140	68	48	165	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.04	0.30	0.03	0.35	0.17	0.12	0.03
s, saturation flow rate [veh/h]	802	1842	870	1843	1628	1742	1523
c, Capacity [veh/h]	179	774	237	774	770	817	651
d1, Uniform Delay [s]	26.91	14.47	23.19	15.51	11.70	11.14	10.21
k, delay calibration	0.04	0.09	0.04	0.17	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	1.03	0.07	3.58	1.30	0.77	0.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.71	0.10	0.83	0.36	0.26	0.07
d, Delay for Lane Group [s/veh]	27.09	15.50	23.26	19.09	13.00	11.91	10.43
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.58	0.29	7.42	2.46	1.78	0.37
50th-Percentile Queue Length [ft]	10.72	139.59	7.26	185.60	61.57	44.53	9.29
95th-Percentile Queue Length [veh]	0.77	9.46	0.52	11.89	4.43	3.21	0.67
95th-Percentile Queue Length [ft]	19.29	236.46	13.06	297.31	110.82	80.15	16.71

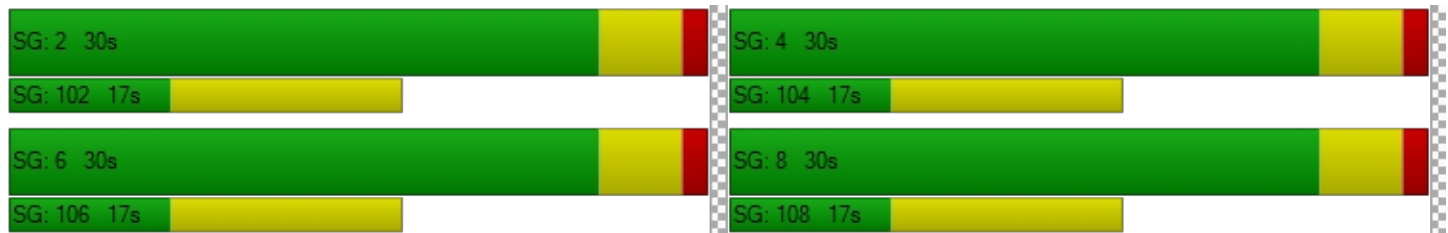


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.09	15.50	15.50	23.26	19.09	19.09	13.00	13.00	13.00	11.91	11.91	10.43
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.14			19.24			13.00			11.64		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.15											
Intersection LOS	B											
Intersection V/C	0.516											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	943	63	50	812	40	62	243	120	110	356	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	943	63	50	812	40	62	243	120	110	356	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	248	17	13	210	10	19	74	37	29	95	8
Total Analysis Volume [veh/h]	42	993	66	52	842	41	76	297	147	118	381	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.07	0.28	0.28	0.10	0.23	0.24	0.08	0.16	0.10	0.11	0.20	0.02
s, saturation flow rate [veh/h]	633	1900	1846	540	1900	1851	1008	1900	1533	1081	1900	1551
c, Capacity [veh/h]	352	1075	1044	294	1075	1047	207	606	489	264	606	495
d1, Uniform Delay [s]	14.72	10.49	10.52	17.15	9.84	9.87	33.81	21.97	20.50	31.60	23.18	18.92
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	1.65	1.72	1.31	1.18	1.23	0.41	0.23	0.13	0.44	0.40	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

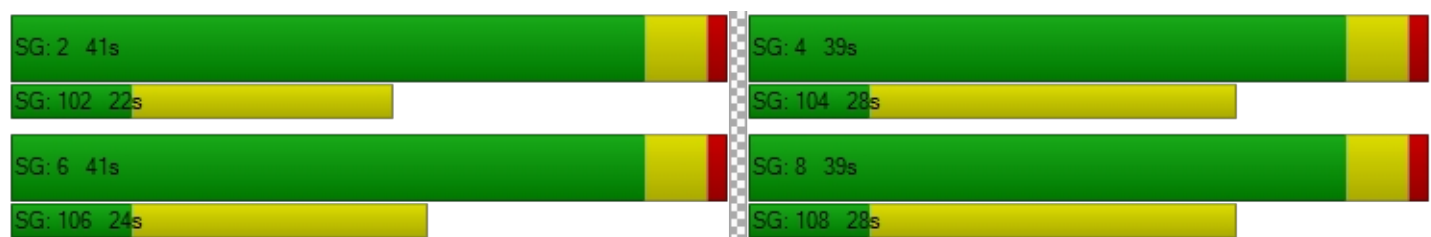
X, volume / capacity	0.12	0.50	0.50	0.18	0.41	0.42	0.37	0.49	0.30	0.45	0.63	0.06
d, Delay for Lane Group [s/veh]	15.41	12.14	12.24	18.47	11.02	11.10	34.22	22.20	20.63	32.04	23.58	18.94
Lane Group LOS	B	B	B	B	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.51	5.38	5.30	0.73	4.17	4.12	1.40	4.34	2.00	2.15	6.00	0.41
50th-Percentile Queue Length [ft]	12.87	134.52	132.42	18.14	104.14	103.02	34.97	108.47	50.09	53.65	149.93	10.23
95th-Percentile Queue Length [veh]	0.93	9.18	9.07	1.31	7.50	7.42	2.52	7.76	3.61	3.86	10.01	0.74
95th-Percentile Queue Length [ft]	23.16	229.62	226.78	32.65	187.44	185.44	62.95	193.88	90.16	96.58	250.34	18.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.41	12.19	12.24	18.47	11.06	11.10	34.22	22.20	20.63	32.04	23.58	18.94
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	12.31			11.47			23.51			25.18		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.16											
Intersection LOS	B											
Intersection V/C	0.484											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.377

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	108	80	40	74	60	40	325	50	40	419	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	108	80	40	74	60	40	325	50	40	419	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	31	23	10	19	15	11	89	14	11	116	6
Total Analysis Volume [veh/h]	11	123	91	41	76	62	44	358	55	44	463	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	55	55	55	55	55	55
g / C, Green / Cycle	0.20	0.20	0.20	0.69	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.04	0.05	0.19	0.04	0.04	0.24	0.01
s, saturation flow rate [veh/h]	1684	1333	1574	942	1900	1559	1036	1900	1546
c, Capacity [veh/h]	384	327	314	610	1302	1068	691	1302	1059
d1, Uniform Delay [s]	29.48	27.29	26.63	8.42	4.88	4.11	7.34	5.24	4.02
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.43	0.66	0.30	0.23	0.52	0.09	0.18	0.76	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.59	0.36	0.20	0.07	0.28	0.05	0.06	0.36	0.02
d, Delay for Lane Group [s/veh]	30.91	27.96	26.93	8.65	5.40	4.20	7.52	6.00	4.05
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.95	1.89	0.97	0.36	2.00	0.26	0.33	2.79	0.10
50th-Percentile Queue Length [ft]	98.85	47.20	24.32	9.12	49.99	6.53	8.23	69.69	2.55
95th-Percentile Queue Length [veh]	7.12	3.40	1.75	0.66	3.60	0.47	0.59	5.02	0.18
95th-Percentile Queue Length [ft]	177.93	84.96	43.78	16.42	89.98	11.75	14.82	125.44	4.60



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.91	30.91	30.91	27.96	27.96	26.93	8.65	5.40	4.20	7.52	6.00	4.05
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.91			27.60			5.57			6.04		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	12.69											
Intersection LOS	B											
Intersection V/C	0.377											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	663	50	80	528	55	40	370	20	139	370	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	663	50	80	528	55	40	370	20	139	370	30
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	172	13	21	138	14	11	99	5	37	99	8
Total Analysis Volume [veh/h]	21	688	52	84	554	58	43	394	21	148	394	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.03	0.20	0.20	0.12	0.16	0.17	0.04	0.21	0.01	0.15	0.21	0.02
s, saturation flow rate [veh/h]	819	1900	1843	728	1900	1826	1003	1900	1571	1003	1900	1577
c, Capacity [veh/h]	422	991	962	368	991	953	258	690	571	258	690	573
d1, Uniform Delay [s]	14.51	11.39	11.40	17.27	10.93	10.95	28.96	20.46	16.43	32.52	20.46	16.55
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	1.10	1.14	1.44	0.83	0.87	0.11	0.33	0.01	0.75	0.33	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.38	0.38	0.23	0.31	0.32	0.17	0.57	0.04	0.57	0.57	0.06
d, Delay for Lane Group [s/veh]	14.74	12.48	12.55	18.71	11.76	11.82	29.07	20.79	16.44	33.27	20.79	16.57
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.25	3.92	3.85	1.18	3.11	3.03	0.71	5.65	0.24	2.76	5.65	0.37
50th-Percentile Queue Length [ft]	6.23	98.02	96.13	29.49	77.77	75.78	17.71	141.30	6.02	69.02	141.30	9.24
95th-Percentile Queue Length [veh]	0.45	7.06	6.92	2.12	5.60	5.46	1.28	9.55	0.43	4.97	9.55	0.67
95th-Percentile Queue Length [ft]	11.22	176.44	173.04	53.08	139.98	136.41	31.88	238.77	10.84	124.23	238.77	16.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.74	12.51	12.55	18.71	11.78	11.82	29.07	20.79	16.44	33.27	20.79	16.57
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.58			12.62			21.37			23.77		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.79											
Intersection LOS	B											
Intersection V/C	0.406											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	30	443	50	73	302	30	50	380	66	90	360	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	443	50	73	302	30	50	380	66	90	360	50
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	123	14	20	83	8	14	106	18	24	95	13
Total Analysis Volume [veh/h]	33	492	56	80	333	33	56	424	74	95	382	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	22	22	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.09	0.18	0.02	0.06	0.22	0.05	0.10	0.20	0.03
s, saturation flow rate [veh/h]	1061	1900	1556	918	1900	1556	1001	1900	1516	965	1900	1531
c, Capacity [veh/h]	515	1044	855	397	1044	855	260	606	484	233	606	489
d1, Uniform Delay [s]	13.48	9.58	7.36	17.70	8.61	7.25	26.31	20.86	17.04	29.03	20.28	16.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.24	1.53	0.15	1.14	0.81	0.08	0.15	0.55	0.05	0.43	0.40	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.47	0.07	0.20	0.32	0.04	0.22	0.70	0.15	0.41	0.63	0.11
d, Delay for Lane Group [s/veh]	13.72	11.11	7.51	18.84	9.41	7.34	26.46	21.41	17.09	29.46	20.69	16.82
Lane Group LOS	B	B	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.33	4.19	0.36	1.01	2.51	0.21	0.81	5.74	0.81	1.50	5.02	0.57
50th-Percentile Queue Length [ft]	8.32	104.76	9.07	25.26	62.81	5.26	20.29	143.51	20.31	37.39	125.39	14.32
95th-Percentile Queue Length [veh]	0.60	7.54	0.65	1.82	4.52	0.38	1.46	9.67	1.46	2.69	8.69	1.03
95th-Percentile Queue Length [ft]	14.97	188.56	16.33	45.48	113.06	9.47	36.51	241.74	36.55	67.29	217.21	25.78

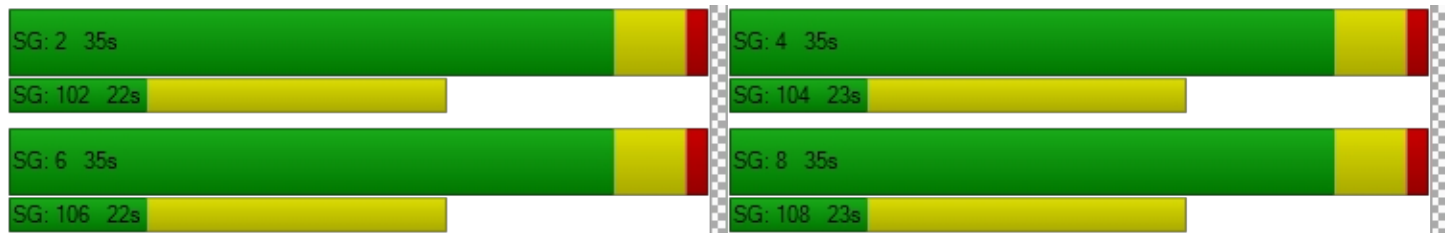


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.72	11.11	7.51	18.84	9.41	7.34	26.46	21.41	17.09	29.46	20.69	16.82
Movement LOS	B	B	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	10.91			10.95			21.35			21.87		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.41											
Intersection LOS	B											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	30	390	10	140	440	130	40	406	180	140	283	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	390	10	140	440	130	40	406	180	140	283	70
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	112	3	43	134	40	11	113	50	36	73	18
Total Analysis Volume [veh/h]	35	450	12	171	538	159	45	452	200	145	293	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.05	0.12	0.12	0.18	0.19	0.19	0.04	0.24	0.13	0.15	0.15	0.05
s, saturation flow rate [veh/h]	760	1900	1880	943	1900	1735	1092	1900	1562	947	1900	1564
c, Capacity [veh/h]	319	933	924	423	933	852	414	706	581	306	706	581
d1, Uniform Delay [s]	18.73	10.31	10.31	18.65	11.18	11.21	18.65	18.11	15.83	25.50	16.32	14.48
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.69	0.64	0.65	2.86	1.22	1.36	0.04	0.36	0.13	0.43	0.15	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

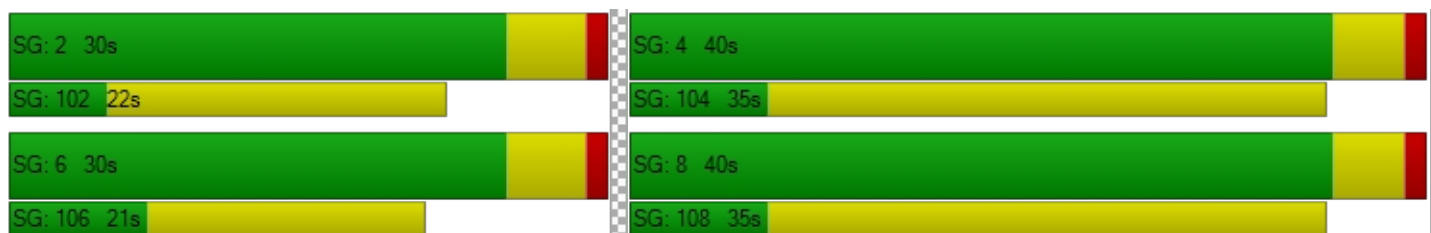
X, volume / capacity	0.11	0.25	0.25	0.40	0.39	0.39	0.11	0.64	0.34	0.47	0.42	0.13
d, Delay for Lane Group [s/veh]	19.43	10.94	10.96	21.52	12.40	12.57	18.69	18.48	15.96	25.93	16.47	14.52
Lane Group LOS	B	B	B	C	B	B	B	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.51	2.36	2.35	2.27	3.14	2.94	0.52	5.61	2.16	2.16	3.26	0.72
50th-Percentile Queue Length [ft]	12.85	59.10	58.76	56.76	78.49	73.41	13.06	140.30	54.09	53.99	81.62	18.03
95th-Percentile Queue Length [veh]	0.93	4.26	4.23	4.09	5.65	5.29	0.94	9.50	3.89	3.89	5.88	1.30
95th-Percentile Queue Length [ft]	23.13	106.38	105.78	102.16	141.28	132.13	23.51	237.43	97.37	97.18	146.91	32.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.43	10.95	10.96	21.52	12.46	12.57	18.69	18.48	15.96	25.93	16.47	14.52
Movement LOS	B	B	B	C	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.55			14.26			17.77			18.87		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.431											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	520	60	50	450	25	60	58	40	29	101	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	520	60	50	450	25	60	58	40	29	101	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	154	18	14	130	7	16	16	11	9	30	6
Total Analysis Volume [veh/h]	12	618	71	58	519	29	65	63	43	35	121	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	7	7
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.01	0.37	0.08	0.27	0.02	0.10	0.10
s, saturation flow rate [veh/h]	884	1854	756	1900	1521	1633	1784
c, Capacity [veh/h]	443	925	327	948	759	517	531
d1, Uniform Delay [s]	9.33	6.67	13.16	5.76	4.27	11.08	11.11
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.45	0.10	0.18	0.01	0.14	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.75	0.18	0.55	0.04	0.33	0.34
d, Delay for Lane Group [s/veh]	9.34	7.12	13.25	5.95	4.28	11.21	11.25
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.05	2.03	0.32	1.29	0.05	0.79	0.84
50th-Percentile Queue Length [ft]	1.24	50.74	8.08	32.35	1.33	19.82	20.92
95th-Percentile Queue Length [veh]	0.09	3.65	0.58	2.33	0.10	1.43	1.51
95th-Percentile Queue Length [ft]	2.23	91.33	14.55	58.23	2.39	35.67	37.65

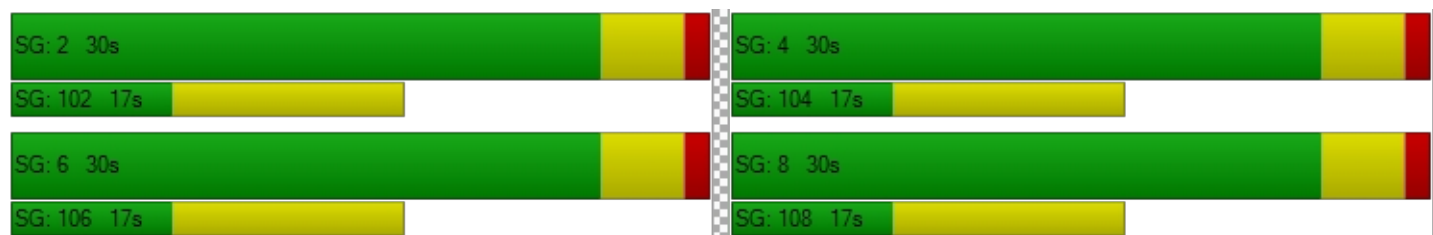


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.34	7.12	7.12	13.25	5.95	4.28	11.21	11.21	11.21	11.25	11.25	11.25
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.16			6.57			11.21			11.25		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.80											
Intersection LOS	A											
Intersection V/C	0.476											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	973	70	80	982	30	90	148	70	70	231	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	973	70	80	982	30	90	148	70	70	231	50
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	268	19	21	255	8	26	43	20	20	66	14
Total Analysis Volume [veh/h]	33	1074	77	83	1022	31	104	171	81	80	263	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.06	0.31	0.31	0.17	0.28	0.28	0.10	0.14	0.07	0.18
s, saturation flow rate [veh/h]	544	1900	1849	496	1900	1872	1057	1749	1108	1821
c, Capacity [veh/h]	292	1070	1041	263	1070	1054	247	563	288	586
d1, Uniform Delay [s]	16.77	11.01	11.03	20.39	10.58	10.60	32.15	21.47	29.04	22.30
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.78	1.99	2.06	3.13	1.64	1.67	0.42	0.21	0.19	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

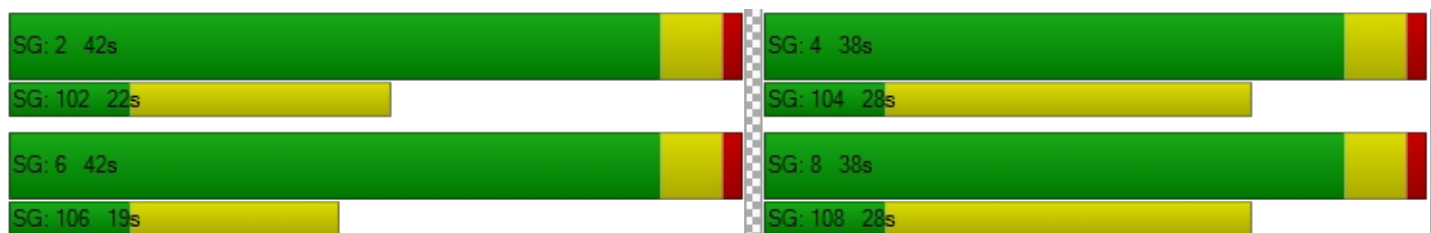
X, volume / capacity	0.11	0.54	0.55	0.32	0.49	0.50	0.42	0.45	0.28	0.55
d, Delay for Lane Group [s/veh]	17.55	13.00	13.09	23.52	12.22	12.28	32.58	21.68	29.24	22.59
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.44	6.15	6.04	1.41	5.67	5.64	1.85	3.54	1.32	4.68
50th-Percentile Queue Length [ft]	11.12	153.64	150.96	35.22	141.85	140.88	46.24	88.62	32.95	116.99
95th-Percentile Queue Length [veh]	0.80	10.21	10.07	2.54	9.58	9.53	3.33	6.38	2.37	8.23
95th-Percentile Queue Length [ft]	20.02	255.28	251.71	63.40	239.51	238.21	83.24	159.52	59.30	205.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.55	13.04	13.09	23.52	12.25	12.28	32.58	21.68	21.68	29.24	22.59	22.59
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.17			13.07			24.86			23.92		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.89											
Intersection LOS	B											
Intersection V/C	0.483											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	50.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.014

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	158	80	50	124	40	80	328	20	60	331	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	158	80	50	124	40	80	328	20	60	331	30
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	55	28	13	32	10	21	85	5	16	86	8
Total Analysis Volume [veh/h]	28	219	111	52	129	42	83	341	21	62	343	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	50	50	50	50
g / C, Green / Cycle	0.26	0.26	0.26	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.23	0.17	0.03	0.78	0.01	0.66	0.02
s, saturation flow rate [veh/h]	1564	1072	1540	540	1558	617	1545
c, Capacity [veh/h]	454	335	399	392	975	438	967
d1, Uniform Delay [s]	28.37	24.48	22.56	17.47	5.67	17.58	5.71
k, delay calibration	0.19	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.46	1.35	0.11	69.08	0.04	27.75	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.79	0.54	0.11	1.08	0.02	0.92	0.03
d, Delay for Lane Group [s/veh]	33.83	25.83	22.68	86.54	5.71	45.33	5.77
Lane Group LOS	C	C	C	F	A	D	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	6.95	2.82	0.59	13.50	0.12	9.43	0.18
50th-Percentile Queue Length [ft]	173.67	70.39	14.71	337.57	3.05	235.65	4.54
95th-Percentile Queue Length [veh]	11.27	5.07	1.06	20.71	0.22	14.46	0.33
95th-Percentile Queue Length [ft]	281.73	126.71	26.48	517.65	5.49	361.53	8.17



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.83	33.83	33.83	25.83	25.83	22.68	86.54	86.54	5.71	45.33	45.33	5.77
Movement LOS	C	C	C	C	C	C	F	F	A	D	D	A
d_A, Approach Delay [s/veh]	33.83			25.24			82.73			42.52		
Approach LOS	C			C			F			D		
d_I, Intersection Delay [s/veh]	49.99											
Intersection LOS	D											
Intersection V/C	1.014											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	742	50	30	774	68	80	360	43	71	330	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	742	50	30	774	68	80	360	43	71	330	70
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	203	14	8	201	18	21	93	11	20	91	19
Total Analysis Volume [veh/h]	44	812	55	31	803	71	82	370	44	79	366	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.07	0.23	0.23	0.05	0.23	0.23	0.09	0.22	0.08	0.24
s, saturation flow rate [veh/h]	643	1900	1849	647	1900	1837	953	1859	986	1826
c, Capacity [veh/h]	329	1013	986	332	1013	979	196	654	222	642
d1, Uniform Delay [s]	16.92	11.33	11.34	16.44	11.37	11.38	34.58	21.61	32.62	22.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.35	1.40	0.56	1.38	1.44	0.53	0.78	0.36	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.43	0.43	0.09	0.44	0.44	0.42	0.63	0.36	0.69
d, Delay for Lane Group [s/veh]	17.76	12.68	12.74	17.00	12.74	12.82	35.11	22.39	32.98	23.79
Lane Group LOS	B	B	B	B	B	B	D	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.60	4.64	4.56	0.41	4.71	4.60	1.52	6.16	1.41	6.91
50th-Percentile Queue Length [ft]	14.98	116.05	113.93	10.25	117.79	115.00	38.06	153.94	35.21	172.80
95th-Percentile Queue Length [veh]	1.08	8.18	8.06	0.74	8.27	8.12	2.74	10.23	2.54	11.22
95th-Percentile Queue Length [ft]	26.96	204.38	201.45	18.44	206.78	202.94	68.51	255.68	63.38	280.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.76	12.71	12.74	17.00	12.78	12.82	35.11	22.39	22.39	32.98	23.79	23.79
Movement LOS	B	B	B	B	B	B	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.95			12.92			24.49			25.18		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.22											
Intersection LOS	B											
Intersection V/C	0.478											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	43	556	10	20	385	40	70	290	20	110	210	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	556	10	20	385	40	70	290	20	110	210	70
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	153	3	6	116	12	18	75	5	28	53	18
Total Analysis Volume [veh/h]	47	612	11	24	464	48	73	302	21	111	212	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.05	0.32	0.01	0.03	0.24	0.03	0.07	0.17	0.11	0.16
s, saturation flow rate [veh/h]	935	1900	1552	820	1900	1542	1068	1866	1053	1749
c, Capacity [veh/h]	463	1049	857	364	1049	852	264	590	250	553
d1, Uniform Delay [s]	13.94	10.35	7.06	16.77	9.28	7.24	27.10	19.79	28.98	19.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	2.37	0.03	0.35	1.35	0.13	0.21	0.30	0.46	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.10	0.58	0.01	0.07	0.44	0.06	0.28	0.55	0.44	0.51
d, Delay for Lane Group [s/veh]	14.38	12.72	7.09	17.12	10.63	7.37	27.31	20.09	29.44	19.80
Lane Group LOS	B	B	A	B	B	A	C	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.50	5.76	0.07	0.29	3.84	0.31	1.06	4.02	1.72	3.47
50th-Percentile Queue Length [ft]	12.39	144.08	1.72	7.17	96.09	7.71	26.59	100.43	42.98	86.81
95th-Percentile Queue Length [veh]	0.89	9.70	0.12	0.52	6.92	0.55	1.91	7.23	3.09	6.25
95th-Percentile Queue Length [ft]	22.30	242.51	3.09	12.91	172.96	13.87	47.87	180.77	77.36	156.25



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.38	12.72	7.09	17.12	10.63	7.37	27.31	20.09	20.09	29.44	19.80	19.80
Movement LOS	B	B	A	B	B	A	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	12.74			10.63			21.42			22.51		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.82											
Intersection LOS	B											
Intersection V/C	0.495											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	563	162	110	442	126	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	563	162	110	442	126	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	167	48	31	124	38	24
Total Analysis Volume [veh/h]	668	192	124	496	153	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	6	6
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.35	0.12	0.16	0.26	0.08	0.06
s, saturation flow rate [veh/h]	1900	1555	774	1900	1810	1509
c, Capacity [veh/h]	1026	840	389	1026	339	283
d1, Uniform Delay [s]	5.50	4.07	12.01	4.83	12.17	11.90
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.26	0.05	0.17	0.13	0.35	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

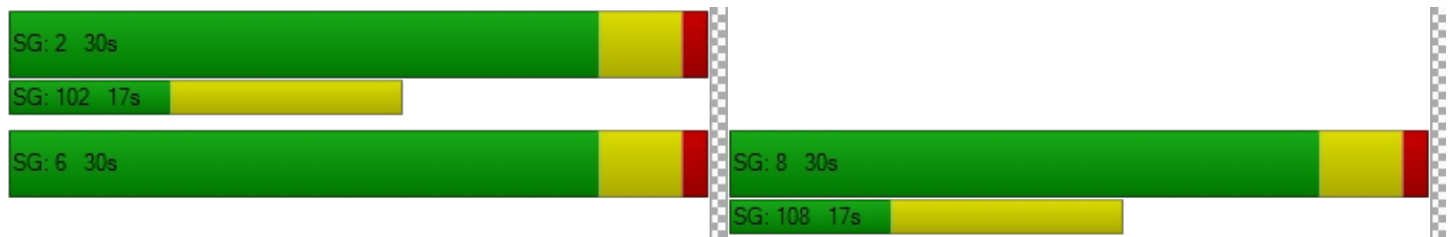
X, volume / capacity	0.65	0.23	0.32	0.48	0.45	0.34
d, Delay for Lane Group [s/veh]	5.77	4.12	12.18	4.96	12.52	12.17
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.54	0.32	0.66	1.00	0.86	0.54
50th-Percentile Queue Length [ft]	38.62	8.11	16.57	24.88	21.58	13.39
95th-Percentile Queue Length [veh]	2.78	0.58	1.19	1.79	1.55	0.96
95th-Percentile Queue Length [ft]	69.52	14.60	29.83	44.79	38.84	24.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.77	4.12	12.18	4.96	12.52	12.17
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.40		6.40		12.38	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.77					
Intersection LOS	A					
Intersection V/C	0.436					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	960	113	89	970	50	52	256	159	60	412	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	960	113	89	970	50	52	256	159	60	412	20
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	285	34	23	253	13	15	72	45	17	117	6
Total Analysis Volume [veh/h]	36	1140	134	93	1013	52	59	289	180	68	467	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.07	0.32	0.09	0.19	0.28	0.28	0.06	0.15	0.12	0.06	0.26
s, saturation flow rate [veh/h]	537	3618	1556	501	1900	1856	914	1900	1558	1095	1881
c, Capacity [veh/h]	264	1909	821	238	1003	979	179	679	557	320	672
d1, Uniform Delay [s]	19.61	13.02	9.76	24.42	12.43	12.47	34.84	19.48	18.67	26.62	22.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	1.39	0.43	4.78	2.05	2.13	1.07	0.42	0.33	0.33	2.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.60	0.16	0.39	0.54	0.54	0.33	0.43	0.32	0.21	0.73
d, Delay for Lane Group [s/veh]	20.68	14.41	10.19	29.20	14.48	14.59	35.90	19.90	19.01	26.95	24.74
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.56	6.89	1.25	1.75	6.10	6.03	1.14	3.96	2.37	1.11	8.15
50th-Percentile Queue Length [ft]	13.90	172.24	31.16	43.75	152.42	150.72	28.40	99.08	59.26	27.73	203.71
95th-Percentile Queue Length [veh]	1.00	11.19	2.24	3.15	10.15	10.06	2.04	7.13	4.27	2.00	12.83
95th-Percentile Queue Length [ft]	25.02	279.86	56.09	78.74	253.66	251.39	51.12	178.35	106.66	49.91	320.74

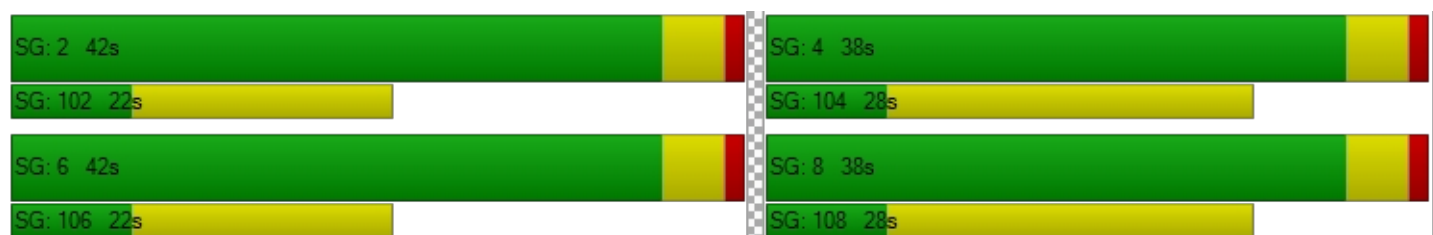


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.68	14.41	10.19	29.20	14.53	14.59	35.90	19.90	19.01	26.95	24.74	24.74
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	14.15			15.72			21.39			25.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.44											
Intersection LOS	B											
Intersection V/C	0.576											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↻			↵↻			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	255	43	109	139	15	75	532	119	32	743	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	255	43	109	139	15	75	532	119	32	743	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	74	12	34	43	5	20	143	32	9	199	5
Total Analysis Volume [veh/h]	12	295	50	134	171	18	81	572	128	34	795	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	44	44	44	44	44
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.55	0.55	0.55	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.01	0.19	0.22	0.29	0.03	0.12	0.19	0.19	0.05	0.43
s, saturation flow rate [veh/h]	1229	1832	600	600	600	680	1900	1748	755	1887
c, Capacity [veh/h]	131	610	177	200	200	225	1048	965	412	1041
d1, Uniform Delay [s]	37.70	21.90	22.89	24.86	18.33	29.15	9.91	9.96	13.80	14.14
k, delay calibration	0.11	0.11	0.18	0.31	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.84	10.45	24.22	0.19	4.43	0.90	1.01	0.39	5.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

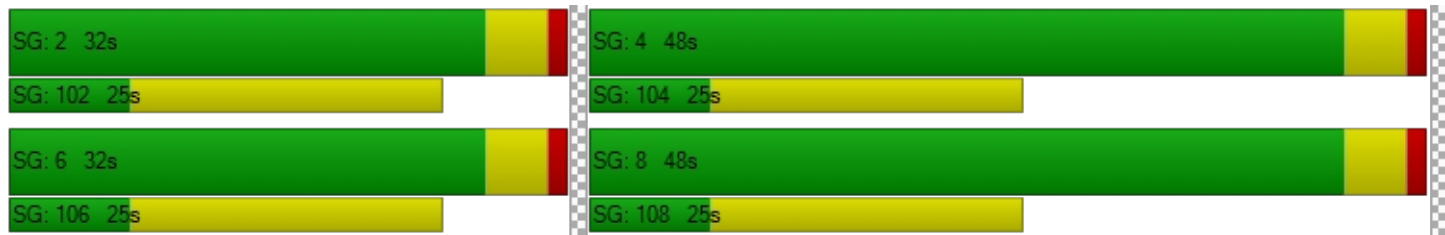
X, volume / capacity	0.09	0.57	0.76	0.86	0.09	0.36	0.34	0.35	0.08	0.78
d, Delay for Lane Group [s/veh]	38.00	22.74	33.34	49.09	18.52	33.57	10.81	10.97	14.20	20.04
Lane Group LOS	D	C	C	D	B	C	B	B	B	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	5.11	2.53	4.14	0.23	1.65	3.42	3.25	0.40	11.90
50th-Percentile Queue Length [ft]	5.83	127.71	63.28	103.48	5.69	41.25	85.48	81.32	9.93	297.43
95th-Percentile Queue Length [veh]	0.42	8.82	4.56	7.45	0.41	2.97	6.15	5.85	0.71	17.55
95th-Percentile Queue Length [ft]	10.49	220.38	113.91	186.27	10.24	74.25	153.87	146.37	17.87	438.84

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.00	22.74	22.74	33.34	49.09	18.52	33.57	10.87	10.97	14.20	20.04	20.04
Movement LOS	D	C	C	C	D	B	C	B	B	B	C	C
d_A, Approach Delay [s/veh]	23.25			40.85			13.24			19.81		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	21.06											
Intersection LOS	C											
Intersection V/C	0.717											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	20	788	88	77	830	173	71	512	168	81	647	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	788	88	77	830	173	71	512	168	81	647	90
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	218	24	20	216	45	19	135	44	22	177	25
Total Analysis Volume [veh/h]	22	870	97	80	863	180	75	542	178	89	710	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	72	63	63	72	65	65	39	28	28	39	29	29
g / C, Green / Cycle	0.60	0.52	0.52	0.60	0.54	0.54	0.32	0.23	0.23	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.26	0.11	0.28	0.29	0.08	0.20	0.21	0.09	0.22	0.22
s, saturation flow rate [veh/h]	642	1900	1818	714	1900	1747	910	1900	1615	980	1900	1778
c, Capacity [veh/h]	369	996	952	417	1028	945	234	444	377	251	456	427
d1, Uniform Delay [s]	12.02	18.33	18.39	12.08	17.60	17.78	31.98	43.90	44.79	31.96	44.23	44.52
k, delay calibration	0.50	0.50	0.50	0.28	0.50	0.50	0.10	0.13	0.18	0.04	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	1.75	1.86	0.58	1.90	2.17	0.70	5.48	13.42	0.32	10.65	14.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.49	0.50	0.19	0.52	0.54	0.32	0.85	0.91	0.35	0.91	0.93
d, Delay for Lane Group [s/veh]	12.33	20.08	20.25	12.65	19.50	19.95	32.68	49.37	58.21	32.27	54.88	58.70
Lane Group LOS	B	C	C	B	B	B	C	D	E	C	D	E
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.26	9.09	8.83	0.94	9.82	9.40	1.59	11.26	11.34	1.87	13.19	13.10
50th-Percentile Queue Length [ft]	6.57	227.29	220.68	23.40	245.48	234.94	39.72	281.61	283.41	46.71	329.78	327.51
95th-Percentile Queue Length [veh]	0.47	14.04	13.70	1.68	14.96	14.42	2.86	16.77	16.86	3.36	19.15	19.04
95th-Percentile Queue Length [ft]	11.83	350.92	342.49	42.11	373.95	360.62	71.50	419.22	421.45	84.08	478.69	475.90

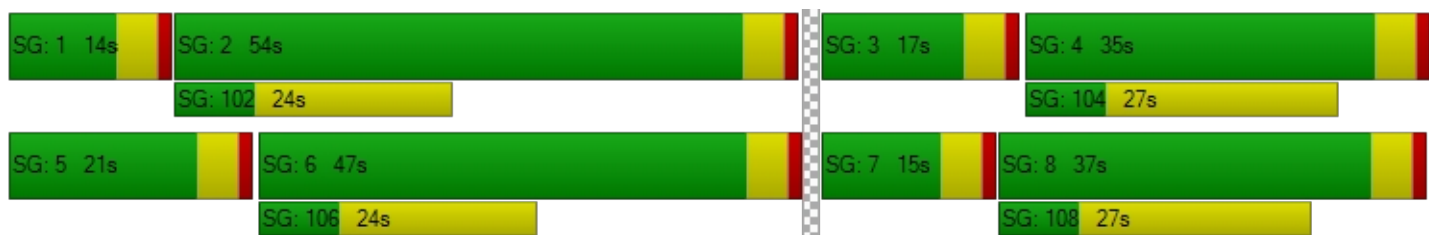


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.33	20.15	20.25	12.65	19.67	19.95	32.68	52.09	58.21	32.27	56.48	58.70
Movement LOS	B	C	C	B	B	B	C	D	E	C	E	E
d_A, Approach Delay [s/veh]	19.99			19.21			51.63			54.32		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	34.47											
Intersection LOS	C											
Intersection V/C	0.548											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	50	516	150	36	325	112	90	472	300	71	633	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	516	150	36	325	112	90	472	300	71	633	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	141	41	9	84	29	24	128	82	19	172	14
Total Analysis Volume [veh/h]	55	563	164	37	335	115	98	513	326	77	687	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.05	0.30	0.10	0.04	0.18	0.07	0.14	0.24	0.25	0.12	0.20	0.20
s, saturation flow rate [veh/h]	1054	1900	1568	859	1900	1564	723	1900	1580	663	1900	1826
c, Capacity [veh/h]	478	927	765	319	927	763	241	723	601	197	723	695
d1, Uniform Delay [s]	15.33	13.03	10.24	20.50	11.13	9.90	26.52	17.58	17.85	29.17	16.74	16.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.07	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	2.95	0.64	0.74	1.09	0.42	0.41	0.37	0.76	0.47	0.22	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.61	0.21	0.12	0.36	0.15	0.41	0.62	0.65	0.39	0.52	0.53
d, Delay for Lane Group [s/veh]	15.82	15.98	10.88	21.24	12.23	10.32	26.93	17.95	18.61	29.64	16.95	17.03
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.61	6.25	1.39	0.51	3.07	0.94	1.48	5.44	4.87	1.23	4.32	4.23
50th-Percentile Queue Length [ft]	15.32	156.25	34.82	12.72	76.81	23.51	37.06	135.95	121.84	30.67	107.92	105.68
95th-Percentile Queue Length [veh]	1.10	10.35	2.51	0.92	5.53	1.69	2.67	9.26	8.49	2.21	7.72	7.60
95th-Percentile Queue Length [ft]	27.57	258.75	62.68	22.90	138.26	42.32	66.71	231.56	212.35	55.20	193.10	189.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.82	15.98	10.88	21.24	12.23	10.32	26.93	18.04	18.61	29.64	16.99	17.03
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.90			12.46			19.16			18.18		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.72											
Intersection LOS	B											
Intersection V/C	0.544											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	80	330	70	50	490	240	90	581	340	240	496	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	330	70	50	490	240	90	581	340	240	496	100
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	91	19	16	158	77	25	159	93	69	143	29
Total Analysis Volume [veh/h]	89	366	78	64	632	309	99	636	372	276	571	115
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.15	0.10	0.05	0.06	0.26	0.27	0.13	0.18	0.24	0.35	0.19	0.19
s, saturation flow rate [veh/h]	603	3618	1547	1017	1900	1637	765	3618	1554	798	1900	1767
c, Capacity [veh/h]	228	1570	672	451	825	711	316	1570	675	331	825	767
d1, Uniform Delay [s]	25.76	12.43	11.77	16.12	15.14	15.33	20.90	13.56	14.69	26.67	13.73	13.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.25	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.97	0.35	0.35	0.66	3.26	4.10	0.21	0.06	0.30	11.89	0.13	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.23	0.12	0.14	0.60	0.62	0.31	0.40	0.55	0.83	0.43	0.43
d, Delay for Lane Group [s/veh]	30.74	12.78	12.12	16.77	18.41	19.43	21.11	13.62	14.99	38.56	13.86	13.91
Lane Group LOS	C	B	B	B	B	B	C	B	B	D	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.64	1.77	0.75	0.76	6.21	5.73	1.28	3.14	4.02	5.66	3.54	3.35
50th-Percentile Queue Length [ft]	41.12	44.29	18.74	18.94	155.28	143.36	32.10	78.49	100.46	141.42	88.61	83.83
95th-Percentile Queue Length [veh]	2.96	3.19	1.35	1.36	10.30	9.66	2.31	5.65	7.23	9.56	6.38	6.04
95th-Percentile Queue Length [ft]	74.01	79.72	33.74	34.09	257.46	241.54	57.78	141.28	180.82	238.93	159.50	150.90

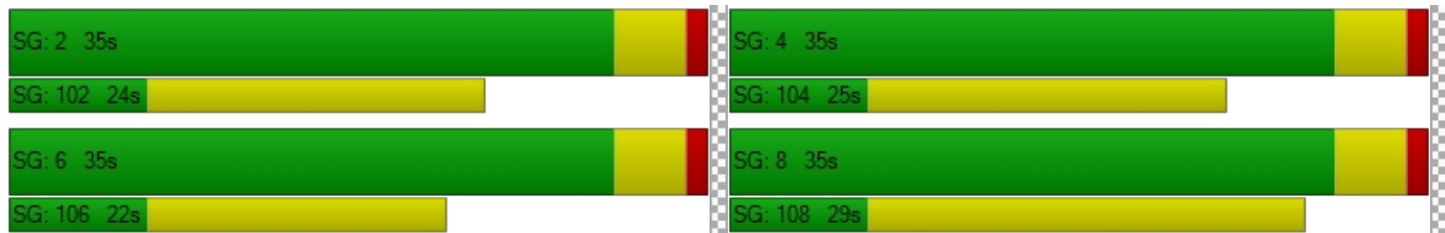


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.74	12.78	12.12	16.77	18.62	19.43	21.11	13.62	14.99	38.56	13.88	13.91
Movement LOS	C	B	B	B	B	B	C	B	B	D	B	B
d_A, Approach Delay [s/veh]	15.68			18.75			14.75			20.97		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.66											
Intersection LOS	B											
Intersection V/C	0.617											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	50.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	100	680	50	240	710	50	130	881	420	253	374	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	680	50	240	710	50	130	881	420	253	374	40
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	180	13	65	192	13	38	257	123	71	104	11
Total Analysis Volume [veh/h]	106	722	53	259	766	54	152	1028	490	283	418	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	36	0	13	37	0	12	59	0	12	59	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	40	27	27	41	29	29	70	55	55	70	59	59
g / C, Green / Cycle	0.33	0.23	0.23	0.34	0.24	0.24	0.59	0.45	0.45	0.59	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.15	0.22	0.22	0.14	0.41	0.44	0.45	0.12	0.12
s, saturation flow rate [veh/h]	955	1900	1843	1763	1900	1843	1060	1900	1660	633	1900	1827
c, Capacity [veh/h]	266	429	416	597	455	442	642	864	754	307	930	894
d1, Uniform Delay [s]	31.42	45.40	45.48	30.82	44.42	44.51	11.67	30.33	32.18	40.17	17.86	17.88
k, delay calibration	0.04	0.26	0.26	0.08	0.27	0.27	0.48	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	16.35	17.73	0.36	15.55	16.96	0.83	14.58	27.85	34.56	0.65	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.92	0.92	0.43	0.91	0.92	0.24	0.90	0.98	0.92	0.25	0.25
d, Delay for Lane Group [s/veh]	31.77	61.75	63.22	31.18	59.97	61.47	12.51	44.91	60.03	74.73	18.51	18.56
Lane Group LOS	C	E	E	C	E	E	B	D	E	E	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.35	13.95	13.79	6.30	14.61	14.46	1.96	23.77	26.19	6.62	3.96	3.85
50th-Percentile Queue Length [ft]	58.81	348.70	344.67	157.43	365.25	361.58	49.09	594.18	654.63	165.50	99.10	96.20
95th-Percentile Queue Length [veh]	4.23	20.07	19.88	10.41	20.88	20.70	3.53	31.76	34.58	10.84	7.14	6.93
95th-Percentile Queue Length [ft]	105.85	501.83	496.90	260.32	521.97	517.50	88.37	794.06	864.43	270.99	178.38	173.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.77	62.42	63.22	31.18	60.66	61.47	12.51	48.55	60.03	74.73	18.54	18.56
Movement LOS	C	E	E	C	E	E	B	D	E	E	B	B
d_A, Approach Delay [s/veh]	58.78			53.62			48.64			39.85		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	50.41											
Intersection LOS	D											
Intersection V/C	0.834											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	⇐⇐		⇑⇑		⇑⇑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	751	130	0	830	303	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	751	130	0	830	303	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	35	0	234	95	0
Total Analysis Volume [veh/h]	808	140	0	937	382	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.26	0.27	0.26	0.11
s, saturation flow rate [veh/h]	1810	1747	3618	3618
c, Capacity [veh/h]	510	492	2227	2227
d1, Uniform Delay [s]	31.40	31.76	8.95	7.41
k, delay calibration	0.35	0.38	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.39	26.88	0.59	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.93	0.96	0.42	0.17
d, Delay for Lane Group [s/veh]	51.79	58.64	9.53	7.58
Lane Group LOS	D	E	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	11.84	12.70	4.43	1.49
50th-Percentile Queue Length [ft]	296.10	317.53	110.66	37.14
95th-Percentile Queue Length [veh]	17.49	18.55	7.88	2.67
95th-Percentile Queue Length [ft]	437.21	463.65	196.92	66.85

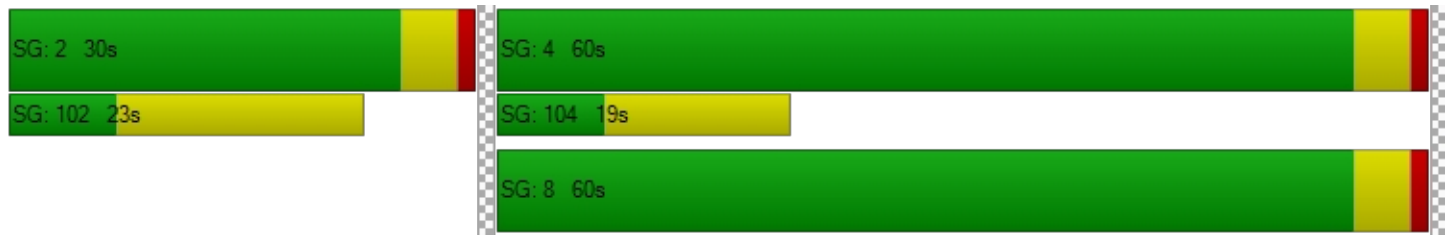


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	54.62	58.64	0.00	9.53	7.58	0.00
Movement LOS	D	E		A	A	
d_A, Approach Delay [s/veh]	55.21		9.53		7.58	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	28.30					
Intersection LOS	C					
Intersection V/C	0.530					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.367

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			TTL			TL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	20	40	850	10	7	393	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	20	40	850	10	7	393	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	6	12	247	3	2	118	9
Total Analysis Volume [veh/h]	42	53	74	12	61	24	46	987	12	8	472	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	67	67	67	67	67
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.05	0.26	0.26	0.13	0.14
s, saturation flow rate [veh/h]	1639	1777	905	1900	1890	1900	1846
c, Capacity [veh/h]	309	325	687	1406	1399	1406	1366
d1, Uniform Delay [s]	35.35	33.70	5.12	4.13	4.13	3.51	3.53
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.19	0.19	0.71	0.71	0.28	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

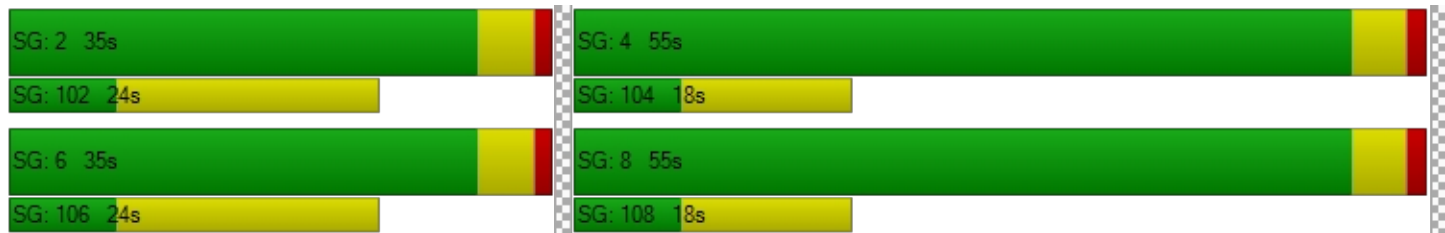
X, volume / capacity	0.55	0.30	0.07	0.36	0.36	0.18	0.19
d, Delay for Lane Group [s/veh]	35.92	33.89	5.31	4.84	4.84	3.79	3.83
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	1.86	0.29	2.73	2.72	1.17	1.18
50th-Percentile Queue Length [ft]	85.19	46.39	7.36	68.30	68.07	29.24	29.46
95th-Percentile Queue Length [veh]	6.13	3.34	0.53	4.92	4.90	2.11	2.12
95th-Percentile Queue Length [ft]	153.35	83.50	13.24	122.93	122.52	52.64	53.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.92	35.92	35.92	33.89	33.89	33.89	5.31	4.84	4.84	0.00	3.81	3.83
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.92			33.89			4.86			3.81		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.00											
Intersection LOS	A											
Intersection V/C	0.367											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.607

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	660	33	70	730	280	66	340	60	250	173	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	660	33	70	730	280	66	340	60	250	173	60
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	200	10	19	195	75	19	98	17	71	49	17
Total Analysis Volume [veh/h]	109	800	40	75	782	300	76	391	69	283	196	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	36	36	44	35	35	20	20	20	37	37	46
g / C, Green / Cycle	0.49	0.40	0.40	0.49	0.39	0.39	0.22	0.22	0.22	0.41	0.41	0.51
(v / s)_j Volume / Saturation Flow Rate	0.15	0.22	0.23	0.09	0.30	0.33	0.07	0.12	0.13	0.22	0.10	0.04
s, saturation flow rate [veh/h]	743	1900	1841	823	1900	1585	1157	1900	1750	1289	1900	1520
c, Capacity [veh/h]	324	759	735	403	732	610	234	426	393	537	777	780
d1, Uniform Delay [s]	17.68	20.92	21.01	13.91	24.27	25.25	36.21	30.94	31.12	19.53	17.55	11.20
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	2.95	3.15	0.08	7.83	13.45	0.30	0.41	0.49	0.30	0.06	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.56	0.57	0.19	0.77	0.84	0.32	0.55	0.57	0.53	0.25	0.09
d, Delay for Lane Group [s/veh]	20.47	23.87	24.15	13.99	32.10	38.70	36.50	31.35	31.61	19.82	17.61	11.22
Lane Group LOS	C	C	C	B	C	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.37	7.10	7.04	0.76	11.48	11.63	1.53	4.42	4.27	4.04	2.62	0.67
50th-Percentile Queue Length [ft]	34.29	177.54	176.04	19.12	286.88	290.87	38.25	110.44	106.64	101.09	65.47	16.71
95th-Percentile Queue Length [veh]	2.47	11.47	11.39	1.38	17.03	17.23	2.75	7.86	7.65	7.28	4.71	1.20
95th-Percentile Queue Length [ft]	61.72	286.80	284.84	34.42	425.77	430.72	68.85	196.61	191.32	181.96	117.85	30.07

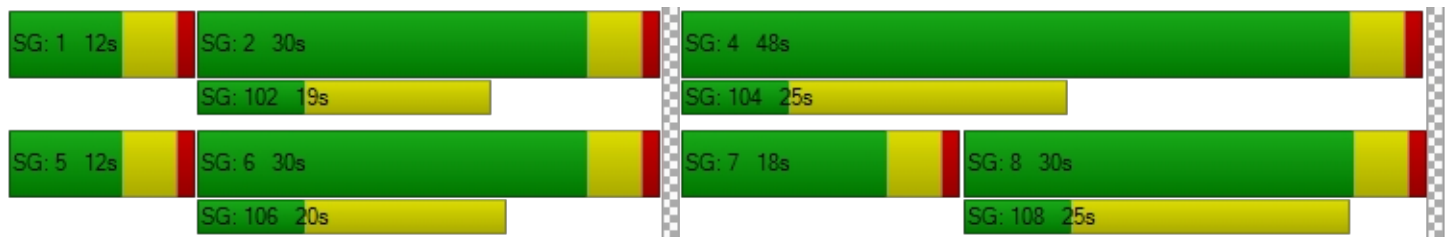


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.47	24.00	24.15	13.99	33.92	38.70	36.50	31.45	31.61	19.82	17.61	11.22
Movement LOS	C	C	C	B	C	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	23.60			33.86			32.19			17.96		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	27.80											
Intersection LOS	C											
Intersection V/C	0.607											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	30	976	62	58	1135	20	74	61	51	40	161	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	976	62	58	1135	20	74	61	51	40	161	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	259	16	16	313	6	23	19	16	13	51	10
Total Analysis Volume [veh/h]	32	1037	66	64	1252	22	93	76	64	51	206	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	20	20
g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.64	0.64	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.07	0.29	0.30	0.12	0.34	0.34	0.21	0.18
s, saturation flow rate [veh/h]	441	1900	1849	519	1900	1887	1136	1629
c, Capacity [veh/h]	282	1212	1180	332	1212	1203	344	455
d1, Uniform Delay [s]	13.77	7.42	7.44	12.98	7.90	7.91	28.21	27.23
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.82	1.26	1.31	1.29	1.64	1.66	0.88	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

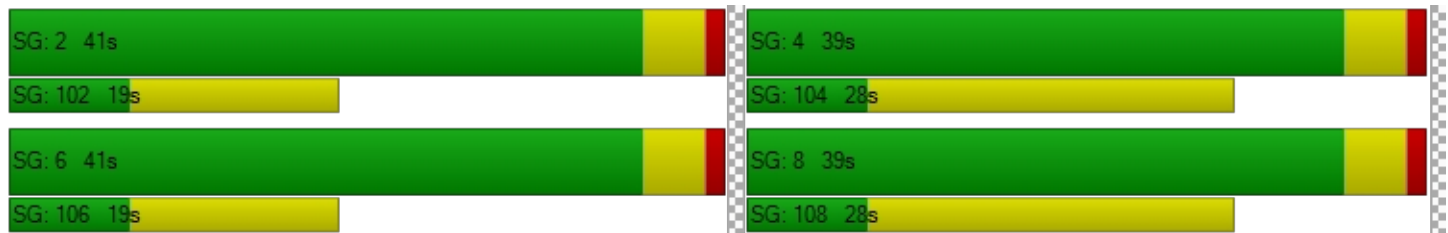
X, volume / capacity	0.11	0.46	0.46	0.19	0.53	0.53	0.68	0.65
d, Delay for Lane Group [s/veh]	14.58	8.68	8.75	14.27	9.54	9.57	29.08	27.81
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.39	4.31	4.25	0.76	5.30	5.28	4.14	4.93
50th-Percentile Queue Length [ft]	9.74	107.78	106.19	18.92	132.44	131.98	103.59	123.23
95th-Percentile Queue Length [veh]	0.70	7.72	7.63	1.36	9.07	9.05	7.46	8.57
95th-Percentile Queue Length [ft]	17.53	192.91	190.68	34.06	226.81	226.18	186.45	214.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.58	8.71	8.75	14.27	9.56	9.57	29.08	29.08	29.08	27.81	27.81	27.81
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.88			9.78			29.08			27.81		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.71											
Intersection LOS	B											
Intersection V/C	0.542											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	105	1000	21	98	1371	79	216	25	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	105	1000	21	98	1371	79	216	25	130
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	27	259	5	27	372	21	66	8	40
Total Analysis Volume [veh/h]	0	0	0	109	1035	22	106	1489	86	265	31	159
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		89	89	89	89	89	89	22	22
g / C, Green / Cycle		0.74	0.74	0.74	0.74	0.74	0.74	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate		0.33	0.28	0.28	0.20	0.42	0.42	0.17	0.10
s, saturation flow rate [veh/h]		331	1900	1881	542	1900	1859	1764	1559
c, Capacity [veh/h]		236	1406	1392	396	1406	1376	323	285
d1, Uniform Delay [s]		19.50	5.61	5.62	10.75	6.93	6.99	48.03	44.51
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.18	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.36	0.77	0.78	1.65	1.63	1.72	15.34	0.63
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.46	0.38	0.38	0.27	0.56	0.57	0.92	0.56
d, Delay for Lane Group [s/veh]		25.85	6.38	6.40	12.40	8.56	8.71	63.37	45.15
Lane Group LOS		C	A	A	B	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		2.48	4.56	4.53	1.50	8.78	8.80	9.94	4.31
50th-Percentile Queue Length [ft]		61.98	113.92	113.33	37.50	219.56	220.08	248.52	107.85
95th-Percentile Queue Length [veh]		4.46	8.06	8.02	2.70	13.64	13.67	15.11	7.72
95th-Percentile Queue Length [ft]		111.56	201.44	200.62	67.50	341.06	341.72	377.79	193.00



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	25.85	6.39	6.40	12.40	8.63	8.71	63.37	63.37	45.15
Movement LOS				C	A	A	B	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			8.21			8.87			57.00		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	15.27											
Intersection LOS	B											
Intersection V/C	0.590											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌			⇌⇌			⇌⇌			⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	920	60	112	970	20	230	10	224	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	920	60	112	970	20	230	10	224	10	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	247	16	29	249	5	64	3	63	4	4	4
Total Analysis Volume [veh/h]	11	987	64	115	998	21	258	11	251	16	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	68	68	79	79	79	21	21	6
g / C, Green / Cycle	0.57	0.57	0.66	0.66	0.66	0.18	0.18	0.05
(v / s)_j Volume / Saturation Flow Rate	0.30	0.30	0.17	0.27	0.27	0.15	0.16	0.03
s, saturation flow rate [veh/h]	1866	1673	696	1900	1883	1813	1577	1767
c, Capacity [veh/h]	1086	946	445	1257	1246	320	279	83
d1, Uniform Delay [s]	16.00	16.20	10.18	9.41	9.41	47.73	48.34	56.01
k, delay calibration	0.50	0.50	0.37	0.50	0.50	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.73	2.15	1.04	0.98	0.99	2.29	7.17	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

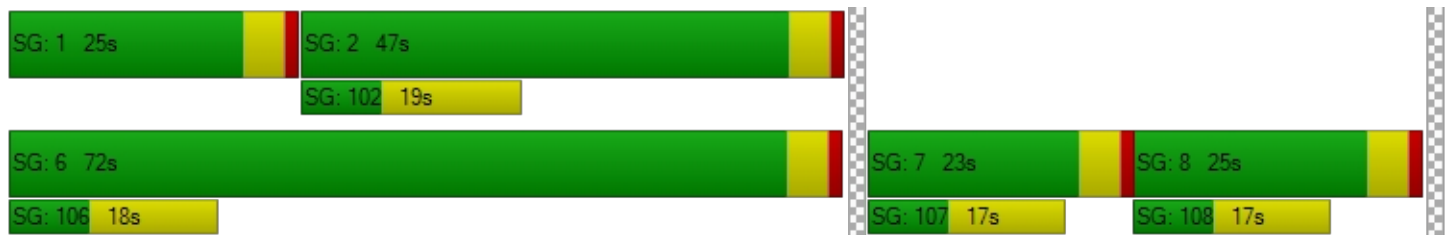
X, volume / capacity	0.51	0.53	0.26	0.41	0.41	0.84	0.90	0.58
d, Delay for Lane Group [s/veh]	17.73	18.36	11.22	10.39	10.40	50.01	55.51	58.39
Lane Group LOS	B	B	B	B	B	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.47	8.78	1.13	6.06	6.02	8.03	7.95	1.47
50th-Percentile Queue Length [ft]	236.83	219.46	28.32	151.46	150.56	200.71	198.75	36.72
95th-Percentile Queue Length [veh]	14.52	13.64	2.04	10.09	10.05	12.68	12.57	2.64
95th-Percentile Queue Length [ft]	363.03	340.94	50.97	252.37	251.18	316.88	314.35	66.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.73	18.01	18.36	11.22	10.39	10.40	50.01	50.01	55.51	58.39	58.39	58.39
Movement LOS	B	B	B	B	B	B	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	18.03			10.48			52.67			58.39		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	22.15											
Intersection LOS	C											
Intersection V/C	0.515											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			┐			┐			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	580	50	126	660	10	160	436	209	0	182	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	580	50	126	660	10	160	436	209	0	182	30
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	150	13	34	180	3	42	115	55	0	49	8
Total Analysis Volume [veh/h]	0	601	52	138	720	11	168	458	220	0	195	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.35	0.15	0.39	0.14	0.38	0.00	0.10	0.02
s, saturation flow rate [veh/h]	1864	950	1894	1205	1785	774	1900	1560
c, Capacity [veh/h]	841	415	1061	367	602	80	641	526
d1, Uniform Delay [s]	20.85	14.30	14.16	30.35	29.80	0.00	22.00	20.16
k, delay calibration	0.50	0.26	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.95	1.13	3.66	0.33	76.44	0.00	0.10	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.78	0.33	0.69	0.46	1.13	0.00	0.30	0.06
d, Delay for Lane Group [s/veh]	27.79	15.43	17.82	30.68	106.24	0.00	22.10	20.18
Lane Group LOS	C	B	B	C	F	A	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	12.28	1.27	10.19	3.19	25.21	0.00	3.04	0.46
50th-Percentile Queue Length [ft]	306.93	31.86	254.83	79.69	630.32	0.00	75.94	11.42
95th-Percentile Queue Length [veh]	18.02	2.29	15.43	5.74	36.10	0.00	5.47	0.82
95th-Percentile Queue Length [ft]	450.59	57.34	385.73	143.45	902.42	0.00	136.69	20.55

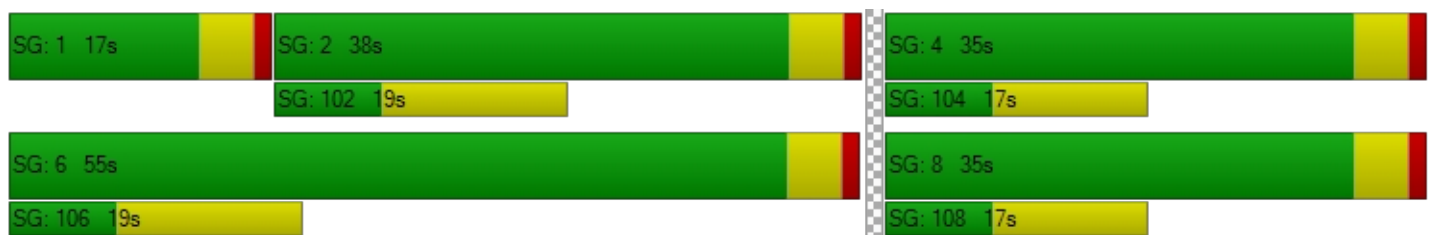


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.79	27.79	15.43	17.82	17.82	30.68	106.24	106.24	0.00	22.10	20.18
Movement LOS		C	C	B	B	B	C	F	F	A	C	C
d_A, Approach Delay [s/veh]	27.79			17.44			91.24			21.83		
Approach LOS	C			B			F			C		
d_I, Intersection Delay [s/veh]	44.49											
Intersection LOS	D											
Intersection V/C	0.770											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.360

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	573	472	10	20	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	573	472	10	20	10
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	156	124	3	9	5
Total Analysis Volume [veh/h]	22	625	496	11	36	18
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	2
g / C, Green / Cycle	0.44	0.44	0.44	0.09
(v / s)_j Volume / Saturation Flow Rate	0.02	0.33	0.27	0.03
s, saturation flow rate [veh/h]	885	1900	1888	1740
c, Capacity [veh/h]	489	831	826	169
d1, Uniform Delay [s]	7.48	4.66	4.28	8.31
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.53	0.28	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

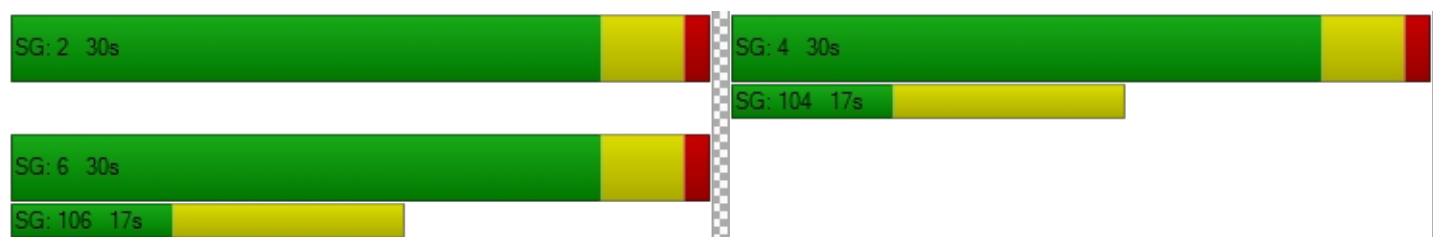
X, volume / capacity	0.05	0.75	0.61	0.32
d, Delay for Lane Group [s/veh]	7.50	5.19	4.55	8.72
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.51	0.35	0.12
50th-Percentile Queue Length [ft]	1.20	12.64	8.75	3.05
95th-Percentile Queue Length [veh]	0.09	0.91	0.63	0.22
95th-Percentile Queue Length [ft]	2.16	22.75	15.74	5.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.50	5.19	4.55	4.55	8.72	8.72
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.26		4.55		8.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.12					
Intersection LOS	A					
Intersection V/C	0.360					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	757	448	80	1115	574	126
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	757	448	80	1115	574	126
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	118	22	302	153	34
Total Analysis Volume [veh/h]	798	472	87	1209	613	135
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	7	87	23	23
g / C, Green / Cycle	0.63	0.63	0.06	0.73	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.33	0.39	0.05	0.33	0.17	0.09
s, saturation flow rate [veh/h]	1900	1643	1810	3618	3514	1483
c, Capacity [veh/h]	1196	1034	110	2636	684	289
d1, Uniform Delay [s]	12.36	13.41	55.53	6.63	47.10	42.78
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	2.72	4.68	0.58	1.77	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.53	0.61	0.79	0.46	0.90	0.47
d, Delay for Lane Group [s/veh]	14.05	16.14	60.21	7.20	48.87	43.22
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	9.81	10.82	2.74	5.81	9.06	3.59
50th-Percentile Queue Length [ft]	245.24	270.43	68.48	145.16	226.40	89.77
95th-Percentile Queue Length [veh]	14.95	16.21	4.93	9.76	13.99	6.46
95th-Percentile Queue Length [ft]	373.66	405.28	123.26	243.95	349.79	161.59



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.48	16.14	60.21	7.20	48.87	43.22
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	15.10		10.76		47.85	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	20.79					
Intersection LOS	C					
Intersection V/C	0.609					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	75	365	145	50	314	64	438	450	30	40	669	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	365	145	50	314	64	438	450	30	40	669	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	98	39	14	89	18	113	116	8	11	179	3
Total Analysis Volume [veh/h]	81	393	156	57	357	73	452	464	31	43	717	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	31	31	31	18	18	18
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.21	0.10	0.06	0.19	0.05	0.41	0.13	0.13	0.05	0.19	0.19
s, saturation flow rate [veh/h]	1030	1900	1521	991	1900	1554	1094	1900	1831	889	1900	1878
c, Capacity [veh/h]	382	821	657	354	821	672	498	830	800	233	501	495
d1, Uniform Delay [s]	20.27	14.28	12.62	20.76	13.95	11.89	20.37	12.83	12.86	26.91	23.58	23.62
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.40	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	2.00	0.85	0.97	1.68	0.33	19.27	0.08	0.08	0.14	0.77	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

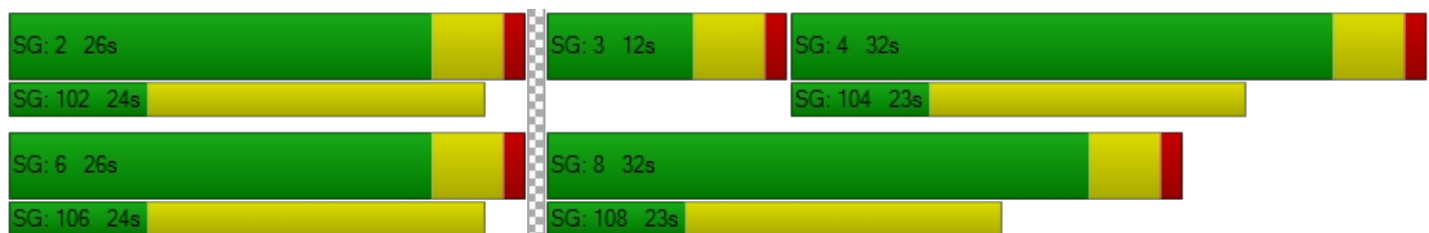
X, volume / capacity	0.21	0.48	0.24	0.16	0.43	0.11	0.91	0.30	0.31	0.18	0.73	0.73
d, Delay for Lane Group [s/veh]	21.54	16.28	13.47	21.74	15.62	12.21	39.64	12.91	12.94	27.05	24.35	24.42
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.11	4.38	1.53	0.79	3.87	0.67	7.55	2.35	2.31	0.63	5.29	5.27
50th-Percentile Queue Length [ft]	27.71	109.62	38.34	19.65	96.71	16.71	188.86	58.87	57.73	15.77	132.18	131.79
95th-Percentile Queue Length [veh]	2.00	7.82	2.76	1.42	6.96	1.20	12.06	4.24	4.16	1.14	9.06	9.04
95th-Percentile Queue Length [ft]	49.88	195.47	69.02	35.38	174.08	30.08	301.55	105.96	103.92	28.38	226.46	225.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.54	16.28	13.47	21.74	15.62	12.21	39.64	12.92	12.94	27.05	24.38	24.42
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.26			15.83			25.67			24.53		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.58											
Intersection LOS	C											
Intersection V/C	0.573											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	310	350	80	500	104	350	871	70	22	734	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	310	350	80	500	104	350	871	70	22	734	30
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	83	94	24	149	31	89	222	18	6	193	8
Total Analysis Volume [veh/h]	54	333	376	95	594	124	357	888	71	23	774	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	56	8	26	26	15	66	78	4	55	55
g / C, Green / Cycle	0.05	0.20	0.46	0.06	0.22	0.22	0.12	0.55	0.65	0.03	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.09	0.25	0.03	0.19	0.20	0.10	0.25	0.05	0.01	0.21	0.21
s, saturation flow rate [veh/h]	1810	3618	1499	2796	1900	1743	3514	3618	1558	1810	1900	1866
c, Capacity [veh/h]	88	731	696	191	414	380	427	1986	1015	57	872	856
d1, Uniform Delay [s]	55.96	42.07	22.96	56.43	45.58	45.88	51.55	16.18	7.63	57.02	22.35	22.37
k, delay calibration	0.04	0.04	0.23	0.04	0.06	0.08	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.17	1.37	0.75	4.18	6.74	1.70	0.73	0.01	1.73	1.79	1.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.46	0.54	0.50	0.89	0.92	0.84	0.45	0.07	0.41	0.47	0.47
d, Delay for Lane Group [s/veh]	58.50	42.24	24.33	57.18	49.76	52.63	53.25	16.91	7.64	58.75	24.13	24.21
Lane Group LOS	E	D	C	E	D	D	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.37	7.78	1.44	11.12	10.81	5.35	7.35	0.65	0.71	8.25	8.16
50th-Percentile Queue Length [ft]	41.67	109.20	194.39	35.99	278.07	270.16	133.65	183.80	16.28	17.81	206.29	203.95
95th-Percentile Queue Length [veh]	3.00	7.80	12.35	2.59	16.59	16.20	9.14	11.80	1.17	1.28	12.96	12.84
95th-Percentile Queue Length [ft]	75.00	194.88	308.72	64.78	414.81	404.94	228.45	294.97	29.30	32.05	324.06	321.05



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	42.24	24.33	57.18	50.85	52.63	53.25	16.91	7.64	58.75	24.17	24.21
Movement LOS	E	D	C	E	D	D	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	34.56			51.86			26.27			25.13		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	33.31											
Intersection LOS	C											
Intersection V/C	0.640											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T			T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	870	233	180	760	141	110	1260	10	106	898	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	870	233	180	760	141	110	1260	10	106	898	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	228	61	53	223	41	30	341	3	29	246	5
Total Analysis Volume [veh/h]	115	912	244	211	892	165	119	1365	11	116	985	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	34	34	9	34	34	6	52	52	6	52	52
g / C, Green / Cycle	0.08	0.29	0.29	0.08	0.29	0.29	0.05	0.43	0.43	0.05	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.16	0.06	0.25	0.11	0.03	0.25	0.25	0.03	0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	1509	3514	3618	1520	3514	3618	1890	3514	3618	1873
c, Capacity [veh/h]	141	1036	432	270	1033	434	176	1571	820	173	1568	812
d1, Uniform Delay [s]	54.46	40.83	36.43	54.36	40.62	34.33	56.00	25.58	25.60	56.05	23.57	23.59
k, delay calibration	0.04	0.15	0.22	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	3.69	2.34	1.88	3.23	0.78	1.69	1.54	2.94	1.68	0.07	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

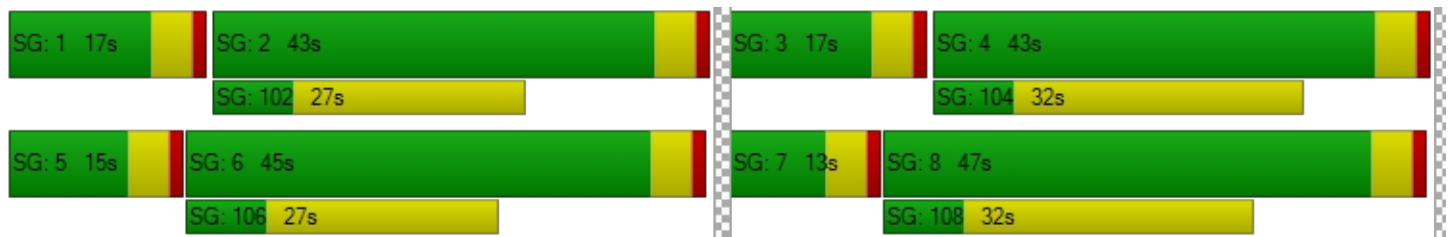
X, volume / capacity	0.82	0.88	0.56	0.78	0.86	0.38	0.68	0.58	0.58	0.67	0.42	0.42
d, Delay for Lane Group [s/veh]	58.86	44.52	38.77	56.24	43.85	35.12	57.69	27.12	28.53	57.74	23.64	24.25
Lane Group LOS	E	D	D	E	D	D	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	14.08	6.75	3.12	12.44	3.84	1.81	9.95	10.73	1.77	6.50	6.90
50th-Percentile Queue Length [ft]	93.91	352.08	168.77	78.08	311.00	95.97	45.34	248.76	268.29	44.20	162.60	172.47
95th-Percentile Queue Length [veh]	6.76	20.24	11.01	5.62	18.22	6.91	3.26	15.12	16.10	3.18	10.69	11.21
95th-Percentile Queue Length [ft]	169.04	505.94	275.30	140.54	455.61	172.75	81.61	378.09	402.61	79.57	267.17	280.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	44.52	38.77	56.24	43.85	35.12	57.69	27.60	28.53	57.74	23.84	24.25
Movement LOS	E	D	D	E	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	44.71			44.78			30.00			27.35		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	36.68											
Intersection LOS	D											
Intersection V/C	0.595											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	170	20	210	30	10	60	140	1590	70	70	1220	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	20	210	30	10	60	140	1590	70	70	1220	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	8	80	9	3	17	35	401	18	20	357	44
Total Analysis Volume [veh/h]	258	30	318	34	11	69	141	1604	71	82	1428	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	11	67	67	7	62	62
g / C, Green / Cycle	0.27	0.27	0.27	0.27	0.27	0.09	0.56	0.56	0.06	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.19	0.02	0.20	0.02	0.05	0.08	0.31	0.31	0.05	0.30	0.30
s, saturation flow rate [veh/h]	1327	1900	1610	1398	1595	1810	3618	1854	1810	3618	1791
c, Capacity [veh/h]	338	515	436	391	432	168	2013	1031	104	1885	933
d1, Uniform Delay [s]	46.46	32.36	39.69	35.78	33.53	53.50	16.99	17.03	55.78	19.54	19.57
k, delay calibration	0.14	0.04	0.15	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.72	0.02	3.31	0.09	0.20	4.26	1.09	2.13	4.93	1.25	2.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.76	0.06	0.73	0.09	0.19	0.84	0.55	0.55	0.79	0.57	0.57
d, Delay for Lane Group [s/veh]	51.18	32.37	43.00	35.88	33.73	57.77	18.08	19.15	60.70	20.79	22.10
Lane Group LOS	D	C	D	D	C	E	B	B	E	C	C
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.88	0.65	8.79	0.79	1.81	4.38	9.78	10.38	2.59	10.28	10.57
50th-Percentile Queue Length [ft]	196.94	16.19	219.77	19.69	45.19	109.48	244.52	259.49	64.79	257.09	264.17
95th-Percentile Queue Length [veh]	12.48	1.17	13.65	1.42	3.25	7.81	14.91	15.66	4.67	15.54	15.90
95th-Percentile Queue Length [ft]	312.02	29.15	341.33	35.45	81.34	195.28	372.74	391.59	116.63	388.57	397.45

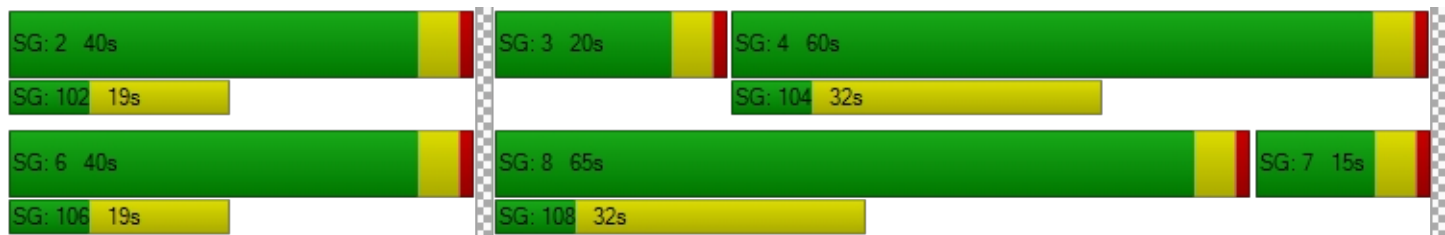


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.18	32.37	43.00	35.88	33.73	33.73	57.77	18.41	19.15	60.70	21.12	22.10
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	45.95			34.37			21.50			23.15		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	26.01											
Intersection LOS	C											
Intersection V/C	0.573											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	32.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	420	1338	512	0	0	1470
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	420	1338	512	0	0	1470
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	110	350	138	0	0	406
Total Analysis Volume [veh/h]	439	1400	553	0	0	1625
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	90	21	75
g / C, Green / Cycle	0.29	0.75	0.17	0.63
(v / s)_i Volume / Saturation Flow Rate	0.12	0.78	0.15	0.24
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1348	631	4336
d1, Uniform Delay [s]	34.06	15.07	48.24	10.84
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	35.18	1.57	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

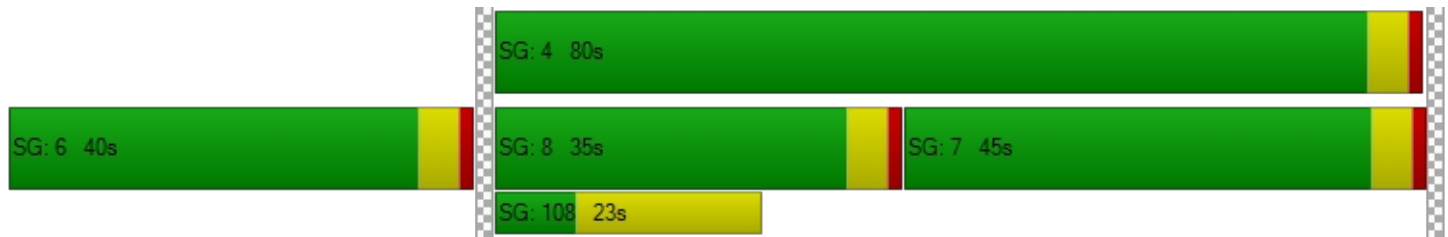
X, volume / capacity	0.42	1.04	0.88	0.37
d, Delay for Lane Group [s/veh]	34.17	50.24	49.81	11.09
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.90	18.26	8.17	5.12
50th-Percentile Queue Length [ft]	122.48	456.51	204.36	128.10
95th-Percentile Queue Length [veh]	8.53	26.10	12.86	8.84
95th-Percentile Queue Length [ft]	213.24	652.61	321.58	220.91

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.17	50.24	49.81	0.00	0.00	11.09
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	46.40		49.81		11.09	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	32.59					
Intersection LOS	C					
Intersection V/C	0.477					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.581

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	512	310	1199	701	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	512	310	1199	701	0
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	142	86	318	186	0
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	567	344	1273	744	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		28	28	82	115	115
g / C, Green / Cycle		0.24	0.24	0.69	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.16	0.22	0.36	0.20	0.20
s, saturation flow rate [veh/h]		3618	1574	3514	1900	1900
c, Capacity [veh/h]		854	372	2414	1827	1827
d1, Uniform Delay [s]		41.48	44.76	9.20	0.11	0.11
k, delay calibration		0.04	0.21	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.33	17.07	0.83	0.25	0.25
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.66	0.93	0.53	0.20	0.20
d, Delay for Lane Group [s/veh]		41.81	61.83	10.03	0.36	0.36
Lane Group LOS		D	E	B	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		7.62	11.69	7.81	0.13	0.13
50th-Percentile Queue Length [ft]		190.58	292.32	195.31	3.19	3.19
95th-Percentile Queue Length [veh]		12.15	17.30	12.40	0.23	0.23
95th-Percentile Queue Length [ft]		303.78	432.52	309.91	5.75	5.75



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.81	61.83	10.03	0.36	0.36
Movement LOS								D	E	B	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.37			6.47		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	19.81											
Intersection LOS	B											
Intersection V/C	0.581											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	20	762	28	40	681	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	20	762	28	40	681	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	5	209	8	13	215	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	22	835	30	50	860	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.24	0.24	0.27	0.27
s, saturation flow rate [veh/h]	1560	1380	1790	1729	1620	1729
c, Capacity [veh/h]	274	280	1370	1292	1244	1292
d1, Uniform Delay [s]	43.47	46.24	4.96	5.05	4.98	5.25
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.61	0.67	0.79	0.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.36	0.59	0.32	0.33	0.35	0.36
d, Delay for Lane Group [s/veh]	43.77	46.97	5.57	5.72	5.77	6.04
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.36	3.32	3.44	3.85
50th-Percentile Queue Length [ft]	65.58	115.83	84.08	82.92	86.07	96.25
95th-Percentile Queue Length [veh]	4.72	8.16	6.05	5.97	6.20	6.93
95th-Percentile Queue Length [ft]	118.04	204.08	151.34	149.26	154.92	173.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.57	5.65	0.00	5.77	5.92	6.04
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		43.77		46.97			5.65			5.91		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	10.98											
Intersection LOS	B											
Intersection V/C	0.391											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.634

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	374	750	20	20	740	76	20	281	20	123	116	332
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	374	750	20	20	740	76	20	281	20	123	116	332
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	194	5	6	209	21	5	76	5	35	33	96
Total Analysis Volume [veh/h]	386	775	21	23	835	86	22	303	22	142	134	383
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	38	66	66	3	30	30	24	24	24	37	37	80
g / C, Green / Cycle	0.32	0.55	0.55	0.02	0.25	0.25	0.20	0.20	0.20	0.31	0.31	0.67
(v / s)_j Volume / Saturation Flow Rate	0.11	0.21	0.21	0.01	0.25	0.25	0.02	0.16	0.01	0.11	0.07	0.24
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1813	1255	1900	1480	1315	1900	1573
c, Capacity [veh/h]	1122	1045	1029	42	482	459	225	378	294	336	593	1054
d1, Uniform Delay [s]	31.20	15.39	15.42	57.96	44.34	44.54	46.07	45.78	39.06	32.35	30.53	8.64
k, delay calibration	0.50	0.50	0.50	0.04	0.40	0.42	0.04	0.11	0.04	0.04	0.04	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.06	1.09	4.16	30.57	34.91	0.07	3.92	0.04	0.31	0.07	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.38	0.38	0.55	0.97	0.99	0.10	0.80	0.07	0.42	0.23	0.36
d, Delay for Lane Group [s/veh]	32.04	16.46	16.50	62.12	74.91	79.45	46.14	49.70	39.10	32.66	30.60	8.94
Lane Group LOS	C	B	B	E	E	E	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.37	6.32	6.28	0.73	17.61	17.60	0.58	8.91	0.53	3.12	2.90	4.19
50th-Percentile Queue Length [ft]	109.32	158.05	157.02	18.36	440.22	439.92	14.57	222.83	13.25	77.92	72.51	104.87
95th-Percentile Queue Length [veh]	7.80	10.45	10.39	1.32	24.49	24.48	1.05	13.81	0.95	5.61	5.22	7.55
95th-Percentile Queue Length [ft]	195.05	261.14	259.77	33.05	612.26	611.91	26.23	345.23	23.85	140.26	130.52	188.76

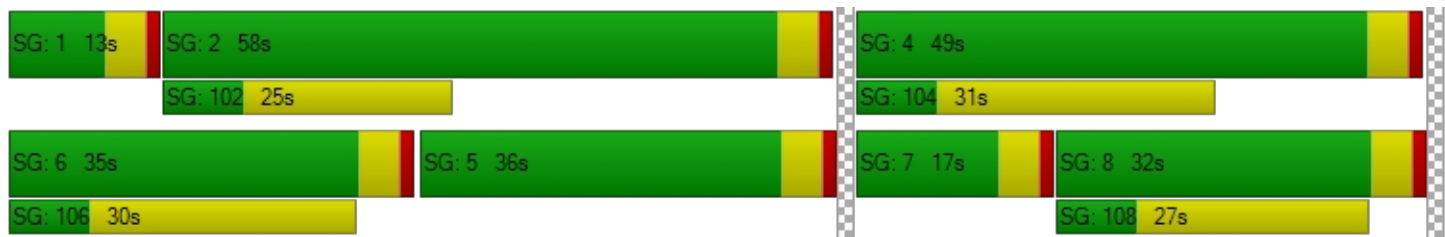


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.04	16.48	16.50	62.12	76.90	79.45	46.14	49.70	39.10	32.66	30.60	8.94
Movement LOS	C	B	B	E	E	E	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.56			76.78			48.80			18.45		
Approach LOS	C			E			D			B		
d_I, Intersection Delay [s/veh]	40.57											
Intersection LOS	D											
Intersection V/C	0.634											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.463

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	169	650	710	50	80	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	169	650	710	50	80	56
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	170	184	13	22	16
Total Analysis Volume [veh/h]	177	680	737	52	90	63
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.72	0.72	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.21	0.36	0.39	0.03	0.05	0.04
s, saturation flow rate [veh/h]	843	1900	1900	1588	1810	1418
c, Capacity [veh/h]	671	1560	1357	1134	139	109
d1, Uniform Delay [s]	3.81	2.25	6.00	3.79	40.34	40.12
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.96	0.89	1.56	0.08	1.88	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

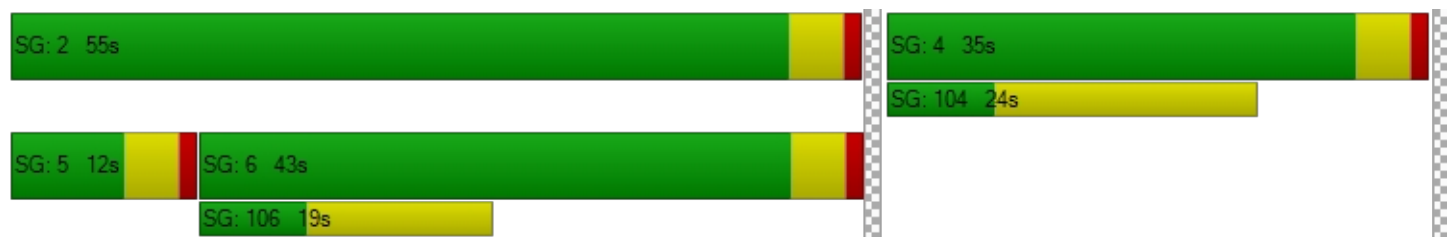
X, volume / capacity	0.26	0.44	0.54	0.05	0.65	0.58
d, Delay for Lane Group [s/veh]	4.77	3.14	7.56	3.87	42.22	41.91
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.40	1.58	5.15	0.23	1.96	1.37
50th-Percentile Queue Length [ft]	10.01	39.53	128.69	5.69	49.11	34.28
95th-Percentile Queue Length [veh]	0.72	2.85	8.87	0.41	3.54	2.47
95th-Percentile Queue Length [ft]	18.01	71.16	221.71	10.24	88.40	61.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.77	3.14	7.56	3.87	42.22	41.91
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.47		7.32		42.10	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.44					
Intersection LOS	A					
Intersection V/C	0.463					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	70	852	93	144	793	160	82	160	122	280	250	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	852	93	144	793	160	82	160	122	280	250	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	222	24	37	205	41	22	43	33	92	82	49
Total Analysis Volume [veh/h]	73	889	97	149	821	166	88	171	130	368	329	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	51	51	12	30	30	13	13	13	25	25	25
g / C, Green / Cycle	0.28	0.43	0.43	0.10	0.25	0.25	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.04	0.25	0.06	0.08	0.23	0.11	0.05	0.09	0.09	0.20	0.17	0.13
s, saturation flow rate [veh/h]	1810	3618	1547	1810	3618	1543	1810	1900	1441	1810	1900	1544
c, Capacity [veh/h]	505	1547	661	178	893	381	197	207	157	383	402	327
d1, Uniform Delay [s]	32.51	26.10	21.00	53.20	44.08	38.19	50.13	52.40	52.42	46.86	45.15	42.79
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.27	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	1.56	0.47	3.91	1.76	0.29	0.59	3.17	4.18	25.39	6.24	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.57	0.15	0.84	0.92	0.44	0.45	0.83	0.83	0.96	0.82	0.60
d, Delay for Lane Group [s/veh]	33.11	27.66	21.47	57.11	45.85	38.48	50.71	55.58	56.59	72.25	51.39	43.46
Lane Group LOS	C	C	C	E	D	D	D	E	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.67	9.74	1.74	4.83	12.75	4.42	2.49	5.18	3.99	13.41	9.92	5.30
50th-Percentile Queue Length [ft]	41.86	243.39	43.42	120.71	318.64	110.48	62.36	129.62	99.65	335.27	248.05	132.39
95th-Percentile Queue Length [veh]	3.01	14.85	3.13	8.43	18.60	7.87	4.49	8.92	7.17	19.42	15.09	9.07
95th-Percentile Queue Length [ft]	75.35	371.32	78.15	210.80	465.01	196.67	112.25	222.98	179.37	485.42	377.19	226.73

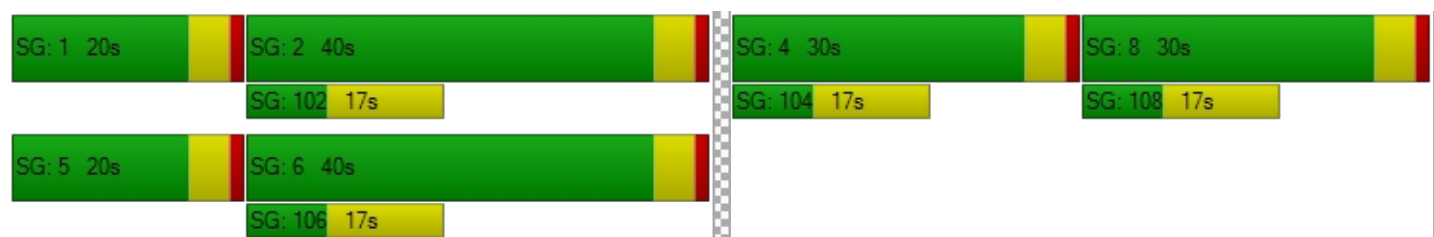


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.11	27.66	21.47	57.11	45.85	38.48	50.71	55.58	56.59	72.25	51.39	43.46
Movement LOS	C	C	C	E	D	D	D	E	E	E	D	D
d_A, Approach Delay [s/veh]	27.47			46.25			54.82			58.23		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	44.57											
Intersection LOS	D											
Intersection V/C	0.622											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.564

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	70	440	93	50	340	50	72	404	40	100	448	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	440	93	50	340	50	72	404	40	100	448	60
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	115	24	14	93	14	21	118	12	27	122	16
Total Analysis Volume [veh/h]	73	461	97	55	374	55	84	474	47	109	488	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.08	0.31	0.06	0.23	0.09	0.25	0.03	0.12	0.26	0.04
s, saturation flow rate [veh/h]	972	1814	863	1856	922	1900	1560	933	1900	1563
c, Capacity [veh/h]	378	832	282	851	250	738	605	259	738	607
d1, Uniform Delay [s]	17.52	12.71	21.14	11.45	24.36	14.97	11.59	24.60	15.12	11.72
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	4.28	1.54	2.13	0.29	0.35	0.02	0.40	0.38	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

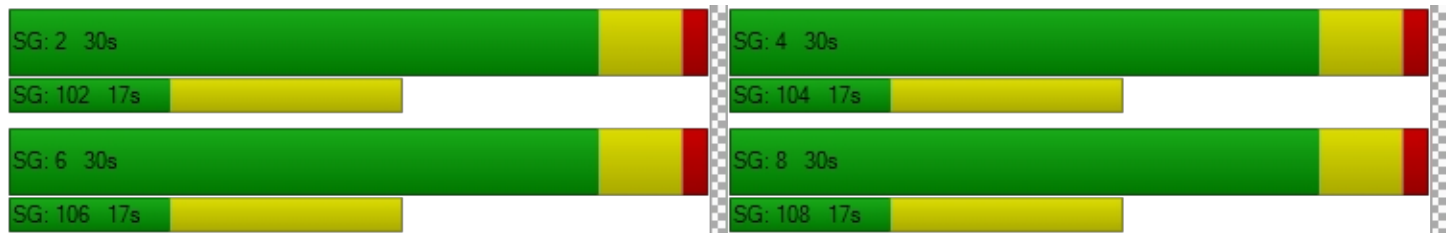
X, volume / capacity	0.19	0.67	0.19	0.50	0.34	0.64	0.08	0.42	0.66	0.11
d, Delay for Lane Group [s/veh]	18.65	16.99	22.68	13.57	24.65	15.32	11.61	25.00	15.50	11.75
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.88	6.13	0.75	3.94	1.05	4.54	0.35	1.39	4.72	0.48
50th-Percentile Queue Length [ft]	21.94	153.36	18.69	98.49	26.37	113.50	8.66	34.85	118.09	12.11
95th-Percentile Queue Length [veh]	1.58	10.20	1.35	7.09	1.90	8.03	0.62	2.51	8.29	0.87
95th-Percentile Queue Length [ft]	39.49	254.91	33.64	177.28	47.47	200.86	15.58	62.72	207.20	21.81

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.65	16.99	16.99	22.68	13.57	13.57	24.65	15.32	11.61	25.00	15.50	11.75
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.18			14.61			16.33			16.70		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.31											
Intersection LOS	B											
Intersection V/C	0.564											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.697

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	62	946	60	124	1120	82	90	404	43	140	488	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	946	60	124	1120	82	90	404	43	140	488	83
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	263	17	33	294	22	25	113	12	40	141	24
Total Analysis Volume [veh/h]	69	1054	67	130	1178	86	101	453	48	162	563	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	62	50	50	62	51	51	49	35	35	49	37	37
g / C, Green / Cycle	0.52	0.42	0.42	0.52	0.43	0.43	0.41	0.29	0.29	0.41	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.11	0.30	0.30	0.18	0.34	0.34	0.10	0.24	0.03	0.14	0.30	0.06
s, saturation flow rate [veh/h]	643	1900	1848	711	1900	1832	1044	1900	1538	1157	1900	1563
c, Capacity [veh/h]	288	799	777	329	809	780	263	556	450	348	591	486
d1, Uniform Delay [s]	20.97	28.68	28.77	20.15	29.78	30.04	28.18	39.36	30.94	26.80	40.44	30.32
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.19	0.04	0.04	0.30	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.95	5.26	5.54	3.52	7.70	8.56	1.58	4.98	0.04	0.36	19.22	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.24	0.71	0.71	0.39	0.79	0.80	0.38	0.81	0.11	0.47	0.95	0.20
d, Delay for Lane Group [s/veh]	22.92	33.94	34.31	23.67	37.49	38.60	29.76	44.35	30.98	27.17	59.67	30.40
Lane Group LOS	C	C	C	C	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.09	14.22	14.03	2.14	17.12	17.08	1.90	12.93	1.02	3.00	19.02	2.04
50th-Percentile Queue Length [ft]	27.19	355.58	350.84	53.51	428.10	427.04	47.47	323.26	25.44	75.03	475.61	50.97
95th-Percentile Queue Length [veh]	1.96	20.41	20.18	3.85	23.91	23.86	3.42	18.83	1.83	5.40	26.18	3.67
95th-Percentile Queue Length [ft]	48.95	510.20	504.43	96.31	597.76	596.49	85.45	470.70	45.80	135.06	654.44	91.74



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.92	34.11	34.31	23.67	38.00	38.60	29.76	44.35	30.98	27.17	59.67	30.40
Movement LOS	C	C	C	C	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	33.48			36.70			40.83			49.83		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	39.05											
Intersection LOS	D											
Intersection V/C	0.697											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	21	183	100	20	160	30	70	506	40	20	599	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	183	100	20	160	30	70	506	40	20	599	22
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	65	36	7	56	11	18	132	10	6	169	6
Total Analysis Volume [veh/h]	30	261	143	28	224	42	73	527	42	23	677	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	78	78	78	78
g / C, Green / Cycle	0.27	0.27	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.26	0.21	0.10	0.30	0.03	0.37
s, saturation flow rate [veh/h]	1669	1430	757	1868	855	1885
c, Capacity [veh/h]	491	426	384	1211	472	1222
d1, Uniform Delay [s]	42.37	37.74	21.73	10.67	16.58	11.83
k, delay calibration	0.36	0.22	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.40	4.10	1.10	1.31	0.20	1.97
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

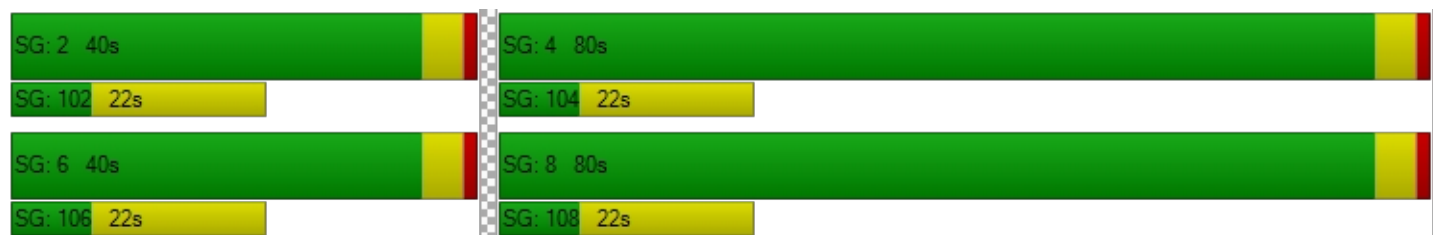
X, volume / capacity	0.88	0.69	0.19	0.47	0.05	0.57
d, Delay for Lane Group [s/veh]	57.78	41.84	22.83	11.98	16.77	13.80
Lane Group LOS	E	D	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	14.46	7.97	1.41	7.48	0.36	10.29
50th-Percentile Queue Length [ft]	361.43	199.17	35.13	186.96	9.01	257.25
95th-Percentile Queue Length [veh]	20.69	12.60	2.53	11.96	0.65	15.55
95th-Percentile Queue Length [ft]	517.32	314.89	63.23	299.08	16.21	388.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.78	57.78	57.78	41.84	41.84	41.84	22.83	11.98	11.98	16.77	13.80	13.80
Movement LOS	E	E	E	D	D	D	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	57.78			41.84			13.22			13.89		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	26.70											
Intersection LOS	C											
Intersection V/C	0.632											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	44	680	40	160	1058	110	60	442	40	130	471	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	680	40	160	1058	110	60	442	40	130	471	128
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	188	11	41	274	28	17	126	11	33	120	33
Total Analysis Volume [veh/h]	49	754	44	166	1096	114	68	503	45	132	480	130
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	53	53	65	56	56	46	34	34	46	37	37
g / C, Green / Cycle	0.54	0.44	0.44	0.54	0.47	0.47	0.38	0.28	0.28	0.38	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.08	0.21	0.21	0.19	0.32	0.33	0.06	0.26	0.03	0.12	0.25	0.09
s, saturation flow rate [veh/h]	608	1900	1852	865	1900	1801	1066	1900	1521	1114	1900	1455
c, Capacity [veh/h]	292	835	814	450	888	842	279	531	425	280	583	446
d1, Uniform Delay [s]	17.90	23.90	23.94	15.88	25.10	25.42	27.32	42.32	32.06	29.33	38.55	31.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.22	0.04	0.04	0.15	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	1.99	2.07	2.32	4.38	5.01	0.17	15.98	0.04	0.46	4.15	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.48	0.49	0.37	0.69	0.71	0.24	0.95	0.11	0.47	0.82	0.29
d, Delay for Lane Group [s/veh]	19.14	25.89	26.00	18.20	29.48	30.43	27.48	58.29	32.10	29.79	42.71	31.77
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.73	8.53	8.40	2.56	14.53	14.42	1.25	16.65	0.97	2.52	13.50	2.87
50th-Percentile Queue Length [ft]	18.18	213.25	209.91	64.10	363.22	360.54	31.13	416.13	24.33	62.97	337.51	71.69
95th-Percentile Queue Length [veh]	1.31	13.32	13.15	4.62	20.78	20.65	2.24	23.34	1.75	4.53	19.53	5.16
95th-Percentile Queue Length [ft]	32.72	333.00	328.71	115.38	519.49	516.24	56.03	583.40	43.79	113.35	488.15	129.04

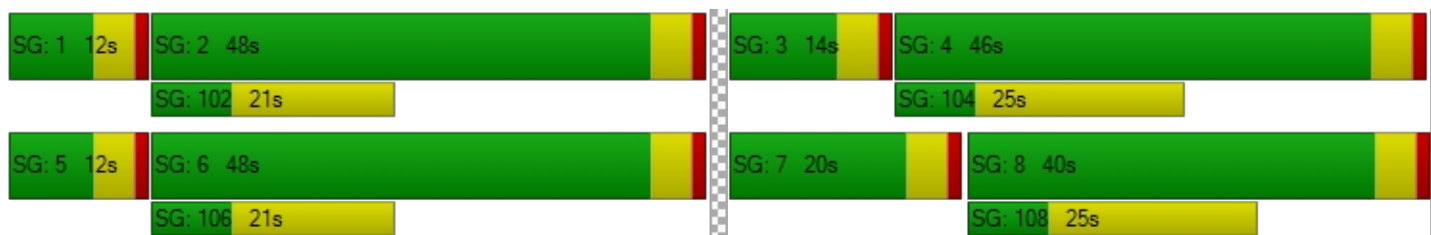


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.14	25.94	26.00	18.20	29.90	30.43	27.48	58.29	32.10	29.79	42.71	31.77
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	25.55			28.53			52.98			38.49		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.10											
Intersection LOS	C											
Intersection V/C	0.661											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	32	292	100	50	334	40	40	490	10	20	597	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	292	100	50	334	40	40	490	10	20	597	64
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	82	28	15	103	12	11	140	3	6	176	19
Total Analysis Volume [veh/h]	36	327	112	61	410	49	46	559	11	24	702	75
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	35	35	35	35	35	35
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.04	0.19	0.08	0.06	0.24	0.03	0.07	0.33	0.01	0.03	0.41	0.06
s, saturation flow rate [veh/h]	891	1710	1371	947	1710	1425	681	1710	1365	776	1710	1264
c, Capacity [veh/h]	244	635	509	299	635	529	169	850	679	264	850	628
d1, Uniform Delay [s]	25.82	17.10	15.06	23.53	18.19	14.32	30.55	13.14	8.92	22.69	15.01	9.40
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.13	0.04	0.04	0.28	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	2.97	0.99	1.54	5.01	0.35	0.32	1.08	0.00	0.05	5.18	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

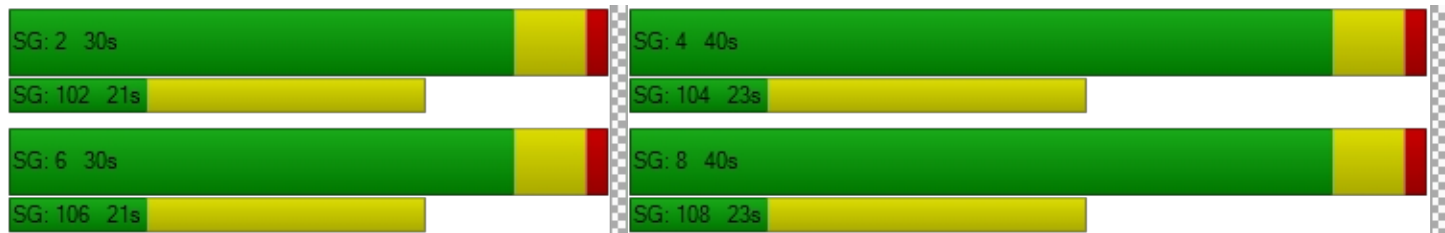
X, volume / capacity	0.15	0.51	0.22	0.20	0.65	0.09	0.27	0.66	0.02	0.09	0.83	0.12
d, Delay for Lane Group [s/veh]	27.09	20.07	16.06	25.08	23.20	14.67	30.86	14.22	8.92	22.74	20.19	9.43
Lane Group LOS	C	C	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.58	4.20	1.25	0.93	5.79	0.51	0.73	5.81	0.07	0.31	9.19	0.54
50th-Percentile Queue Length [ft]	14.56	104.98	31.23	23.23	144.65	12.81	18.20	145.21	1.87	7.73	229.68	13.46
95th-Percentile Queue Length [veh]	1.05	7.56	2.25	1.67	9.73	0.92	1.31	9.76	0.13	0.56	14.16	0.97
95th-Percentile Queue Length [ft]	26.21	188.96	56.22	41.81	243.27	23.05	32.75	244.03	3.37	13.91	353.96	24.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.09	20.07	16.06	25.08	23.20	14.67	30.86	14.22	8.92	22.74	20.19	9.43
Movement LOS	C	C	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.66			22.62			15.37			19.26		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.07											
Intersection LOS	B											
Intersection V/C	0.650											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	10	262	150	110	574	130	100	370	120	120	530	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	262	150	110	574	130	100	370	120	120	530	80
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	71	41	30	158	36	27	101	33	34	148	22
Total Analysis Volume [veh/h]	11	284	163	121	633	143	109	403	131	134	592	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	41	41	41	33	22	22	33	22	22
g / C, Green / Cycle	0.53	0.53	0.53	0.46	0.46	0.46	0.37	0.24	0.24	0.37	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.11	0.11	0.21	0.22	0.10	0.21	0.09	0.11	0.18	0.19
s, saturation flow rate [veh/h]	808	1900	1543	1096	1900	1745	1059	1900	1504	1227	1900	1775
c, Capacity [veh/h]	435	1004	816	459	869	798	379	461	365	373	466	435
d1, Uniform Delay [s]	11.23	11.79	11.21	21.68	16.82	16.91	20.61	32.80	28.31	21.46	31.45	31.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.07	0.06	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.71	0.55	1.40	1.76	1.99	0.25	3.16	0.22	0.22	0.91	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.28	0.20	0.26	0.46	0.47	0.29	0.87	0.36	0.36	0.75	0.76
d, Delay for Lane Group [s/veh]	11.34	12.49	11.76	23.07	18.58	18.89	20.86	35.96	28.53	21.68	32.36	32.68
Lane Group LOS	B	B	B	C	B	B	C	D	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.11	3.17	1.75	2.01	5.84	5.54	1.52	8.63	2.33	1.86	6.85	6.60
50th-Percentile Queue Length [ft]	2.79	79.22	43.67	50.20	145.90	138.52	38.08	215.64	58.21	46.44	171.16	164.91
95th-Percentile Queue Length [veh]	0.20	5.70	3.14	3.61	9.80	9.40	2.74	13.44	4.19	3.34	11.14	10.81
95th-Percentile Queue Length [ft]	5.02	142.60	78.61	90.36	244.95	235.03	68.55	336.05	104.78	83.59	278.44	270.21

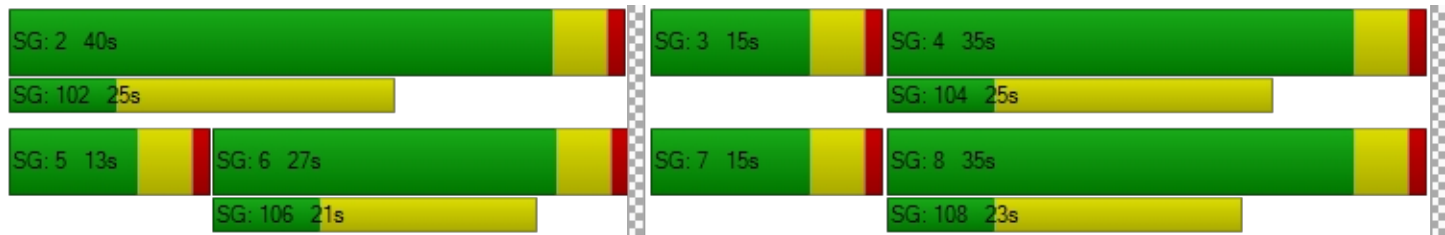


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.34	12.49	11.76	23.07	18.69	18.89	20.86	35.96	28.53	21.68	32.49	32.68
Movement LOS	B	B	B	C	B	B	C	D	C	C	C	C
d_A, Approach Delay [s/veh]	12.20			19.32			31.89			30.73		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	24.34											
Intersection LOS	C											
Intersection V/C	0.485											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	390	70	80	0	210	0	831	440	150	916	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	390	70	80	0	210	0	831	440	150	916	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	109	20	24	0	63	0	228	121	39	235	0
Total Analysis Volume [veh/h]	11	436	78	96	0	251	0	912	483	154	942	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	7	52	52	52	12	68
g / C, Green / Cycle	0.02	0.26	0.26	0.06	0.43	0.43	0.43	0.10	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.03	0.09	0.37	0.43	0.09	0.26
s, saturation flow rate [veh/h]	1810	1900	1658	3514	2818	1900	1632	1810	3618
c, Capacity [veh/h]	33	490	428	199	1226	820	705	181	2063
d1, Uniform Delay [s]	58.18	38.34	38.95	54.89	21.03	30.62	33.83	53.10	14.98
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.21	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.34	0.48	0.67	0.03	10.75	31.47	18.39	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

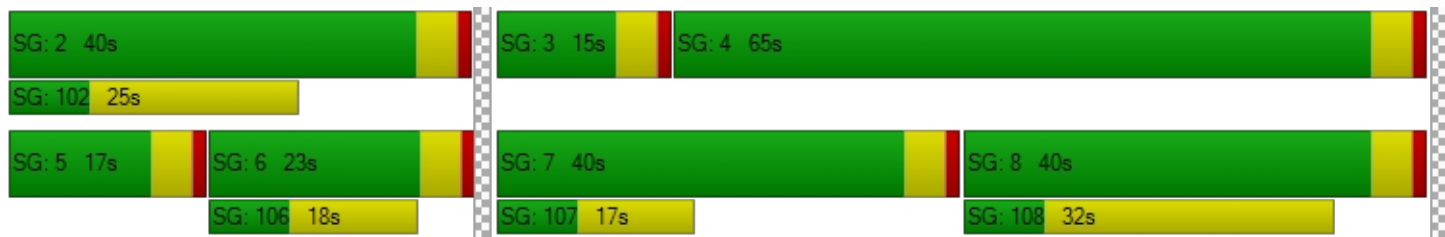
X, volume / capacity	0.33	0.54	0.59	0.48	0.20	0.85	0.99	0.85	0.46
d, Delay for Lane Group [s/veh]	60.32	38.67	39.43	55.56	21.06	41.36	65.30	71.48	15.71
Lane Group LOS	E	D	D	E	C	D	E	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.70	6.54	1.43	2.20	19.38	24.87	5.72	8.34
50th-Percentile Queue Length [ft]	8.75	167.48	163.44	35.72	55.10	484.54	621.81	142.90	208.54
95th-Percentile Queue Length [veh]	0.63	10.94	10.73	2.57	3.97	26.60	33.05	9.64	13.08
95th-Percentile Queue Length [ft]	15.75	273.60	268.27	64.29	99.17	665.04	826.29	240.92	326.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.98	39.43	55.56	0.00	21.06	0.00	46.99	65.30	71.48	15.71	0.00
Movement LOS	E	D	D	E		C		D	E	E	B	
d_A, Approach Delay [s/veh]	39.49			30.61			53.33			23.55		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	39.12											
Intersection LOS	D											
Intersection V/C	0.691											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1119	20	40	1245	30	60	70	30	40	90	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1119	20	40	1245	30	60	70	30	40	90	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	310	6	11	331	8	20	24	10	12	26	3
Total Analysis Volume [veh/h]	33	1238	22	43	1324	32	81	94	40	47	106	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.08	0.33	0.33	0.10	0.36	0.36	0.14	0.10
s, saturation flow rate [veh/h]	408	1900	1885	447	1900	1882	1506	1586
c, Capacity [veh/h]	282	1285	1275	309	1285	1272	376	389
d1, Uniform Delay [s]	12.17	6.28	6.29	11.48	6.53	6.54	29.08	27.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.35	1.36	0.94	1.56	1.59	0.51	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.49	0.49	0.14	0.53	0.53	0.57	0.42
d, Delay for Lane Group [s/veh]	13.01	7.63	7.65	12.42	8.09	8.13	29.59	27.78
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.38	4.36	4.34	0.47	4.90	4.88	3.69	2.65
50th-Percentile Queue Length [ft]	9.42	108.97	108.60	11.79	122.52	122.06	92.35	66.28
95th-Percentile Queue Length [veh]	0.68	7.78	7.76	0.85	8.53	8.51	6.65	4.77
95th-Percentile Queue Length [ft]	16.96	194.57	194.06	21.23	213.28	212.66	166.24	119.30

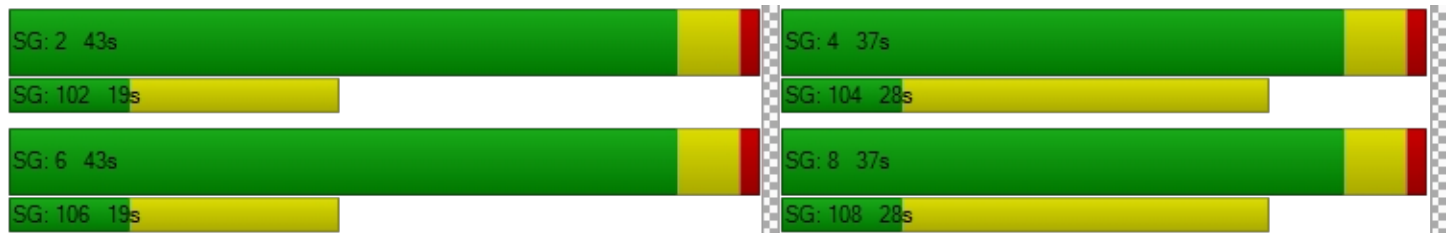


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.01	7.64	7.65	12.42	8.11	8.13	29.59	29.59	29.59	27.78	27.78	27.78
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.78			8.24			29.59			27.78		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.59											
Intersection LOS	B											
Intersection V/C	0.502											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	720	20	50	1238	30	40	130	20	80	150	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	720	20	50	1238	30	40	130	20	80	150	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	206	6	13	333	8	14	47	7	24	46	12
Total Analysis Volume [veh/h]	34	822	23	54	1332	32	58	188	29	97	182	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.08	0.22	0.22	0.08	0.36	0.36	0.18	0.23
s, saturation flow rate [veh/h]	405	1900	1875	659	1900	1880	1499	1397
c, Capacity [veh/h]	232	1137	1122	393	1137	1125	484	459
d1, Uniform Delay [s]	18.41	8.31	8.31	12.70	10.08	10.10	24.12	26.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.06
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	0.94	0.96	0.73	2.36	2.41	0.39	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

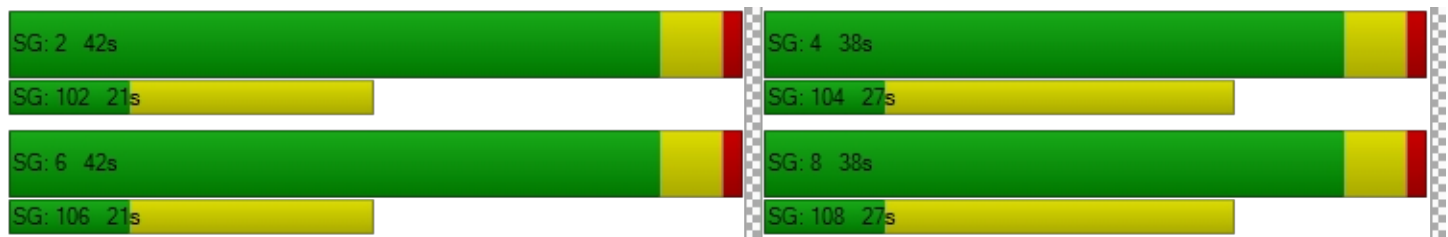
X, volume / capacity	0.15	0.37	0.37	0.14	0.60	0.60	0.57	0.71
d, Delay for Lane Group [s/veh]	19.74	9.25	9.27	13.42	12.44	12.52	24.51	27.75
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.51	3.61	3.58	0.62	7.22	7.20	4.23	5.71
50th-Percentile Queue Length [ft]	12.86	90.13	89.48	15.40	180.43	179.93	105.63	142.63
95th-Percentile Queue Length [veh]	0.93	6.49	6.44	1.11	11.62	11.60	7.60	9.62
95th-Percentile Queue Length [ft]	23.15	162.23	161.06	27.72	290.57	289.93	189.91	240.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.74	9.26	9.27	13.42	12.48	12.52	24.51	24.51	24.51	27.75	27.75	27.75
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.67			12.52			24.51			27.75		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.51											
Intersection LOS	B											
Intersection V/C	0.596											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	1076	10	20	1375	70	10	90	10	180	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1076	10	20	1375	70	10	90	10	180	80	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	309	3	5	366	19	3	26	3	49	22	5
Total Analysis Volume [veh/h]	34	1237	11	21	1466	75	12	104	12	195	87	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	20	20	20	20
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.26	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.10	0.33	0.33	0.05	0.41	0.41	0.09	0.01	0.22	0.01
s, saturation flow rate [veh/h]	342	1900	1893	452	1900	1859	1304	1561	1300	1556
c, Capacity [veh/h]	205	1198	1194	277	1198	1172	381	397	407	395
d1, Uniform Delay [s]	19.59	8.12	8.12	14.37	9.20	9.27	23.91	22.38	28.35	22.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.74	1.63	1.63	0.53	2.70	2.84	0.17	0.01	0.80	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.52	0.52	0.08	0.65	0.65	0.30	0.03	0.69	0.06
d, Delay for Lane Group [s/veh]	21.33	9.74	9.75	14.90	11.90	12.11	24.07	22.39	29.15	22.54
Lane Group LOS	C	A	A	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.54	5.30	5.29	0.26	7.58	7.58	1.68	0.16	4.93	0.30
50th-Percentile Queue Length [ft]	13.48	132.39	132.13	6.48	189.47	189.58	41.91	4.09	123.13	7.55
95th-Percentile Queue Length [veh]	0.97	9.07	9.06	0.47	12.09	12.10	3.02	0.29	8.56	0.54
95th-Percentile Queue Length [ft]	24.26	226.74	226.39	11.66	302.35	302.48	75.43	7.36	214.12	13.59

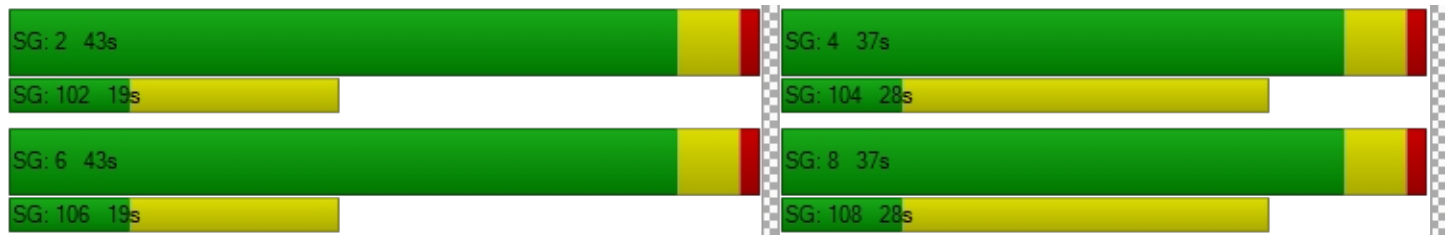


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.33	9.75	9.75	14.90	12.00	12.11	24.07	24.07	22.39	29.15	29.15	22.54
Movement LOS	C	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.06			12.04			23.92			28.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.27											
Intersection LOS	B											
Intersection V/C	0.629											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1146	120	50	1365	160	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1146	120	50	1365	160	100
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	304	32	13	361	42	26
Total Analysis Volume [veh/h]	1215	127	53	1445	169	106
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	70	70	70	70	11	11
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.12	0.12
(v / s)_j Volume / Saturation Flow Rate	0.36	0.37	0.13	0.41	0.10	0.07
s, saturation flow rate [veh/h]	1863	1791	406	3547	1770	1556
c, Capacity [veh/h]	1440	1384	324	2741	221	194
d1, Uniform Delay [s]	3.62	3.70	8.19	3.91	38.05	36.94
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.09	1.22	1.08	0.73	5.48	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

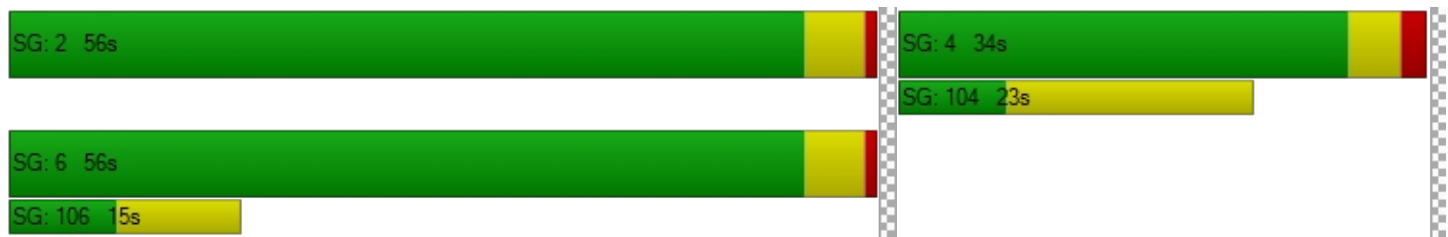
X, volume / capacity	0.47	0.48	0.16	0.53	0.77	0.55
d, Delay for Lane Group [s/veh]	4.71	4.92	9.27	4.64	43.53	39.33
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.11	3.21	0.53	3.67	3.84	2.26
50th-Percentile Queue Length [ft]	77.85	80.23	13.18	91.72	96.01	56.56
95th-Percentile Queue Length [veh]	5.61	5.78	0.95	6.60	6.91	4.07
95th-Percentile Queue Length [ft]	140.13	144.42	23.72	165.10	172.82	101.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.80	4.92	9.27	4.64	43.53	39.33
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.81		4.80		41.91	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.08					
Intersection LOS	A					
Intersection V/C	0.503					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	773	89	70	1324	50	115	300	50	30	210	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	773	89	70	1324	50	115	300	50	30	210	20
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	210	24	19	368	14	33	85	14	8	59	6
Total Analysis Volume [veh/h]	22	840	97	78	1472	56	130	340	57	34	236	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	28	22	22
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.25	0.13	0.40	0.41	0.34	0.17
s, saturation flow rate [veh/h]	346	1900	1814	607	1900	1865	1567	1682
c, Capacity [veh/h]	150	901	860	281	901	884	658	693
d1, Uniform Delay [s]	26.73	11.05	11.08	18.52	13.87	13.98	17.69	14.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.29	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.06	2.23	2.38	2.44	9.96	10.75	5.93	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.53	0.53	0.28	0.85	0.86	0.80	0.42
d, Delay for Lane Group [s/veh]	28.79	13.28	13.46	20.96	23.83	24.73	23.62	14.15
Lane Group LOS	C	B	B	C	C	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.38	4.30	4.19	1.03	10.05	10.20	6.92	2.58
50th-Percentile Queue Length [ft]	9.39	107.56	104.77	25.68	251.30	255.04	173.10	64.41
95th-Percentile Queue Length [veh]	0.68	7.70	7.54	1.85	15.25	15.44	11.24	4.64
95th-Percentile Queue Length [ft]	16.90	192.60	188.59	46.22	381.29	386.00	280.99	115.93

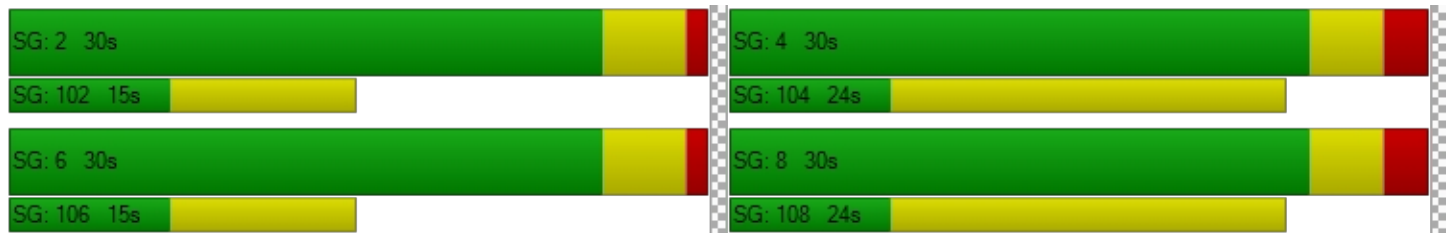


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.79	13.36	13.46	20.96	24.26	24.73	23.62	23.62	23.62	14.15	14.15	14.15
Movement LOS	C	B	B	C	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.72			24.12			23.62			14.15		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	20.23											
Intersection LOS	C											
Intersection V/C	0.744											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	162	120	30	194	20	70	415	50	20	359	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	162	120	30	194	20	70	415	50	20	359	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	47	35	9	58	6	21	123	15	5	96	5
Total Analysis Volume [veh/h]	23	189	140	36	232	24	83	494	59	21	386	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	34	34
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.56	0.56
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.03	0.12	0.02	0.37	0.23
s, saturation flow rate [veh/h]	1161	1697	1042	1863	1529	1726	1836
c, Capacity [veh/h]	283	481	192	528	433	1040	1098
d1, Uniform Delay [s]	22.61	19.12	26.95	17.61	15.66	8.72	7.41
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	1.73	0.47	0.58	0.05	2.68	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

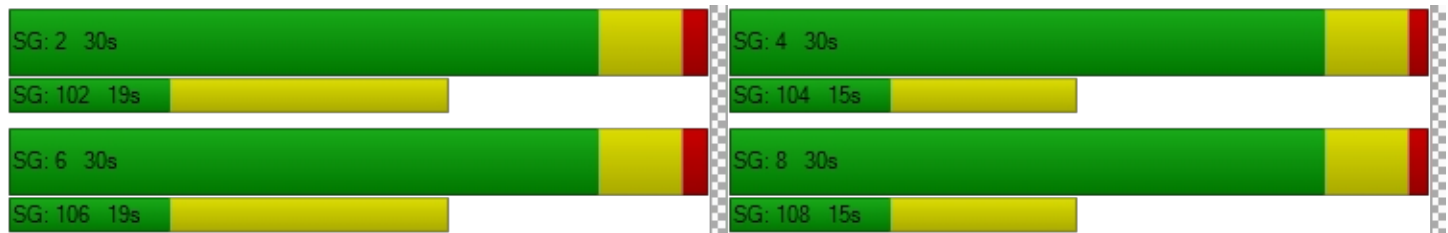
X, volume / capacity	0.08	0.68	0.19	0.44	0.06	0.61	0.39
d, Delay for Lane Group [s/veh]	22.73	20.85	27.42	18.18	15.71	11.41	8.45
Lane Group LOS	C	C	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.27	3.84	0.50	2.49	0.23	4.79	2.62
50th-Percentile Queue Length [ft]	6.82	96.05	12.41	62.23	5.69	119.66	65.56
95th-Percentile Queue Length [veh]	0.49	6.92	0.89	4.48	0.41	8.37	4.72
95th-Percentile Queue Length [ft]	12.28	172.89	22.35	112.01	10.24	209.36	118.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.73	20.85	20.85	27.42	18.18	15.71	11.41	11.41	11.41	8.45	8.45	8.45
Movement LOS	C	C	C	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	20.98			19.12			11.41			8.45		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	13.96											
Intersection LOS	B											
Intersection V/C	0.562											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.689

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	775	0	190	0	0	0	0	1241	313	140	1450	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	775	0	190	0	0	0	0	1241	313	140	1450	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	203	0	50	0	0	0	0	340	86	40	415	0
Total Analysis Volume [veh/h]	811	0	199	0	0	0	0	1359	343	160	1661	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	0	66	66	110	66	66	66
g / C, Green / Cycle	0.33	0.33	0.00	0.55	0.55	0.92	0.55	0.55	0.55
(v / s)_j Volume / Saturation Flow Rate	0.28	0.30	0.00	0.00	0.26	0.22	0.39	0.30	0.30
s, saturation flow rate [veh/h]	1810	1693	1863	298	5176	1595	407	3618	1900
c, Capacity [veh/h]	599	561	7	160	2845	1461	210	1989	1044
d1, Uniform Delay [s]	37.32	38.03	0.00	0.00	16.47	0.54	39.11	17.38	17.38
k, delay calibration	0.18	0.20	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.61	8.91	0.00	0.00	0.58	0.08	22.46	1.09	2.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.85	0.89	0.00	0.00	0.48	0.23	0.76	0.55	0.55
d, Delay for Lane Group [s/veh]	42.92	46.94	0.00	0.00	17.05	0.62	61.57	18.47	19.44
Lane Group LOS	D	D	A	A	B	A	E	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	14.69	15.14	0.00	0.00	7.46	0.03	6.03	9.57	10.33
50th-Percentile Queue Length [ft]	367.30	378.39	0.00	0.00	186.43	0.83	150.75	239.13	258.26
95th-Percentile Queue Length [veh]	20.98	21.52	0.00	0.00	11.94	0.06	10.06	14.64	15.60
95th-Percentile Queue Length [ft]	524.46	537.90	0.00	0.00	298.39	1.49	251.42	365.93	390.04

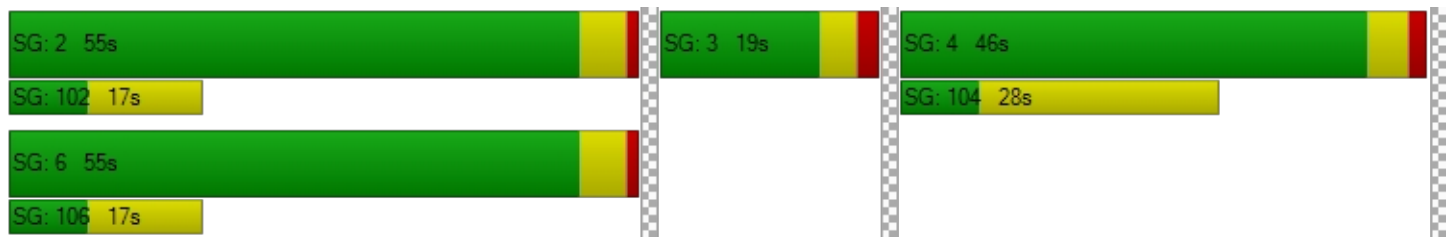


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.42	46.94	46.94	0.00	0.00	0.00	0.00	17.05	0.62	61.57	18.81	19.44
Movement LOS	D	D	D	A	A	A	A	B	A	E	B	B
d_A, Approach Delay [s/veh]	44.91			0.00			13.74			22.56		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	24.23											
Intersection LOS	C											
Intersection V/C	0.689											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	19.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	170	82	30	246	34	30	122	100	22	209	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	170	82	30	246	34	30	122	100	22	209	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	53	25	9	70	10	9	35	28	6	57	8
Total Analysis Volume [veh/h]	12	210	101	34	281	39	34	138	113	24	229	33
Pedestrian Volume [ped/h]	17			9			15			28		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	540	537	529	518
Degree of Utilization, x	0.60	0.66	0.54	0.55

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	3.90	4.80	3.18	3.32
95th-Percentile Queue Length [ft]	97.60	120.02	79.44	83.03
Approach Delay [s/veh]	19.10	21.75	17.49	18.20
Approach LOS	C	C	C	C
Intersection Delay [s/veh]	19.28			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.371

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	659	525	45	87	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	659	525	45	87	10
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	198	145	12	26	3
Total Analysis Volume [veh/h]	12	794	580	50	105	12
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	10	4
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.16
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.31	0.03	0.07
s, saturation flow rate [veh/h]	842	3618	1900	1577	1787
c, Capacity [veh/h]	409	1605	843	699	296
d1, Uniform Delay [s]	9.20	4.67	5.25	3.76	8.77
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.38	0.02	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

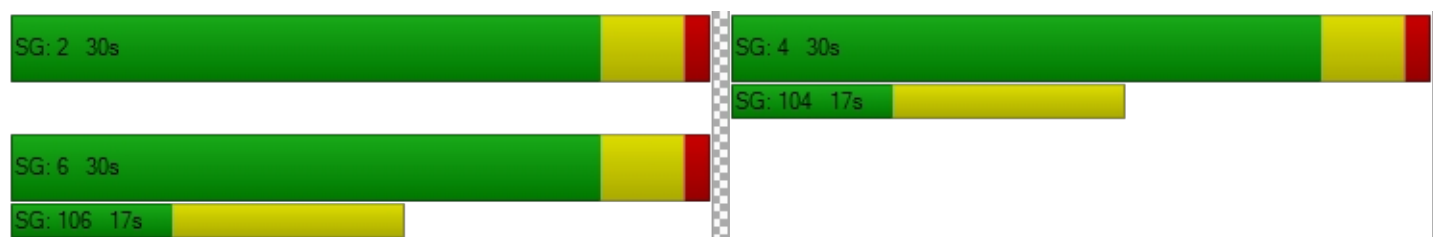
X, volume / capacity	0.03	0.49	0.69	0.07	0.40
d, Delay for Lane Group [s/veh]	9.21	4.76	5.62	3.78	9.09
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.39	0.70	0.04	0.38
50th-Percentile Queue Length [ft]	0.89	9.81	17.50	1.02	9.46
95th-Percentile Queue Length [veh]	0.06	0.71	1.26	0.07	0.68
95th-Percentile Queue Length [ft]	1.61	17.65	31.50	1.84	17.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.21	4.76	5.62	3.78	9.09	9.09
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.82		5.48		9.09	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.41					
Intersection LOS	A					
Intersection V/C	0.371					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1000	10	10	1570	700	520	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	300	3	3	412	184	161	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1201	10	10	1647	734	643	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		61	61	61	61	61	61	20	20
g / C, Green / Cycle		0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate		0.16	0.32	0.32	0.02	0.46	0.45	0.18	0.04
s, saturation flow rate [veh/h]		308	1900	1894	459	3618	1615	3514	1617
c, Capacity [veh/h]		194	1282	1279	305	2442	1090	782	360
d1, Uniform Delay [s]		21.23	6.97	6.97	11.95	8.71	8.70	33.22	28.41
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		3.03	1.25	1.26	0.20	1.51	3.33	2.23	0.27
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.25	0.47	0.47	0.03	0.67	0.67	0.82	0.20
d, Delay for Lane Group [s/veh]		24.26	8.22	8.23	12.15	10.23	12.03	35.45	28.68
Lane Group LOS		C	A	A	B	B	B	D	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		0.97	6.31	6.29	0.12	8.09	7.75	6.66	1.26
50th-Percentile Queue Length [ft]		24.30	157.63	157.26	2.88	202.19	193.74	166.43	31.39
95th-Percentile Queue Length [veh]		1.75	10.42	10.40	0.21	12.75	12.32	10.89	2.26
95th-Percentile Queue Length [ft]		43.75	260.58	260.09	5.19	318.78	307.88	272.22	56.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.26	8.23	8.23	12.15	10.23	12.03	35.45	28.68	28.68
Movement LOS				C	A	A	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	0.00			8.84			10.79			34.77		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.15											
Intersection LOS	B											
Intersection V/C	0.638											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	97.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	635	340	430	0	520	353	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	635	340	430	0	520	353	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	172	92	116	0	140	94	0	21
Total Analysis Volume [veh/h]	0	0	0	0	687	368	464	0	561	376	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.38	0.23	0.26	0.30	0.20	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.53	37.79	12.33	23.78	20.13
k, delay calibration		0.50	0.43	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		76.22	1.19	285.11	1.86	3.49	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

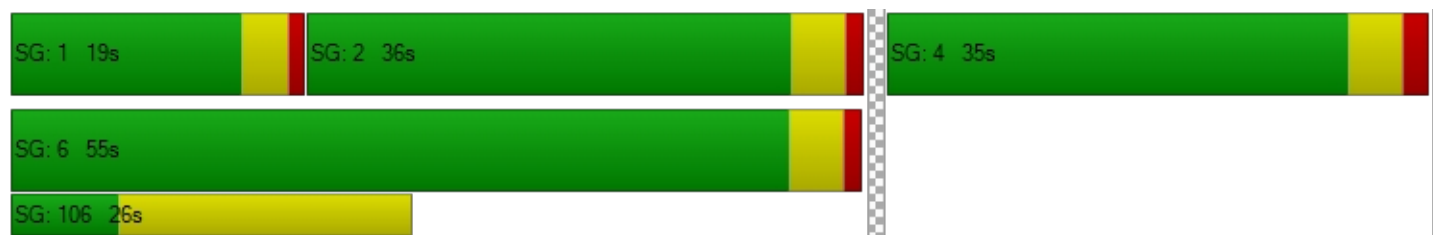
X, volume / capacity		1.13	0.41	1.60	0.53	0.57	0.15
d, Delay for Lane Group [s/veh]		106.06	12.71	322.90	14.20	27.27	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		25.93	4.43	29.25	7.01	6.92	1.29
50th-Percentile Queue Length [ft]		648.30	110.85	731.14	175.19	173.03	32.26
95th-Percentile Queue Length [veh]		37.01	7.89	45.65	11.35	11.24	2.32
95th-Percentile Queue Length [ft]		925.18	197.19	1141.30	283.73	280.90	58.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	106.06	12.71	322.90	0.00	14.20	27.27	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			73.50			153.94			26.05		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	97.34											
Intersection LOS	F											
Intersection V/C	0.834											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	42	170	110	150	210	10	70	1011	50	0	1040	74
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	170	110	150	210	10	70	1011	50	0	1040	74
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	48	31	47	66	3	18	267	13	0	279	20
Total Analysis Volume [veh/h]	47	191	124	189	264	13	74	1066	53	0	1114	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	55	55	55	55	55
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.61	0.61	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.05	0.11	0.09	0.18	0.17	0.18	0.23	0.23	0.36	0.37
s, saturation flow rate [veh/h]	980	1676	1334	1037	1660	421	3192	1625	1676	1626
c, Capacity [veh/h]	253	489	389	310	484	199	1935	985	1016	986
d1, Uniform Delay [s]	32.07	25.49	24.90	33.34	27.11	28.00	9.09	9.11	10.84	11.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	0.51	0.47	1.94	1.07	5.23	0.57	1.14	2.48	2.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.19	0.39	0.32	0.61	0.57	0.37	0.38	0.39	0.59	0.61
d, Delay for Lane Group [s/veh]	32.42	26.00	25.37	35.27	28.18	33.22	9.67	10.25	13.33	13.78
Lane Group LOS	C	C	C	D	C	C	A	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.90	3.26	2.08	3.99	5.07	1.64	3.51	3.77	7.17	7.33
50th-Percentile Queue Length [ft]	22.45	81.55	51.89	99.86	126.71	40.99	87.86	94.19	179.13	183.24
95th-Percentile Queue Length [veh]	1.62	5.87	3.74	7.19	8.76	2.95	6.33	6.78	11.55	11.77
95th-Percentile Queue Length [ft]	40.42	146.79	93.39	179.74	219.01	73.78	158.14	169.54	288.87	294.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.42	26.00	25.37	35.27	28.18	28.18	33.22	9.85	10.25	0.00	13.54	13.78
Movement LOS	C	C	C	D	C	C	C	A	B		B	B
d_A, Approach Delay [s/veh]	26.61			31.05			11.31			13.56		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.73											
Intersection LOS	B											
Intersection V/C	0.549											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.743

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	1256	90	140	1375	80	220	620	126	110	640	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1256	90	140	1375	80	220	620	126	110	640	80
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	325	23	37	366	21	58	163	33	29	171	21
Total Analysis Volume [veh/h]	72	1301	93	149	1465	85	231	651	132	118	685	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	44	34	34	44	36	36	37	27	27	37	23	23
g / C, Green / Cycle	0.49	0.38	0.38	0.49	0.40	0.40	0.41	0.30	0.30	0.41	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.13	0.37	0.06	0.22	0.41	0.06	0.22	0.21	0.22	0.13	0.21	0.21
s, saturation flow rate [veh/h]	561	3547	1504	669	3547	1448	1051	1900	1744	915	1900	1791
c, Capacity [veh/h]	252	1341	568	293	1411	576	411	571	524	359	478	451
d1, Uniform Delay [s]	20.26	27.54	18.59	20.09	27.14	17.36	20.98	27.97	28.17	19.22	31.82	31.98
k, delay calibration	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.16	0.17	0.11	0.16	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.48	18.47	0.62	6.19	34.53	0.54	5.45	2.36	3.01	0.53	5.36	6.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

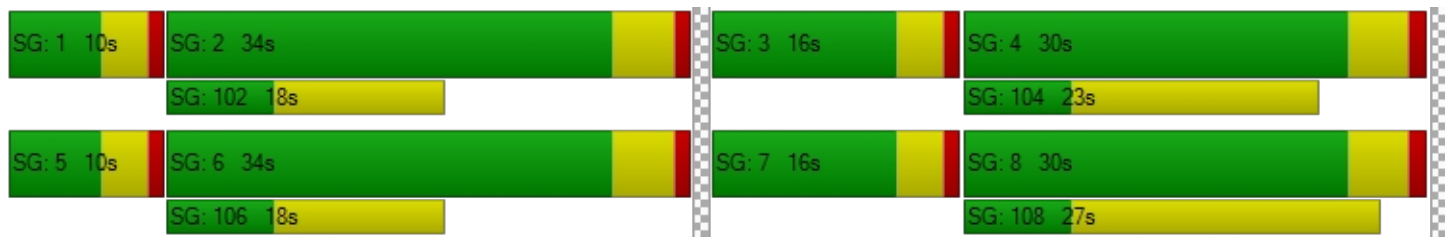
X, volume / capacity	0.29	0.97	0.16	0.51	1.04	0.15	0.56	0.71	0.72	0.33	0.82	0.84
d, Delay for Lane Group [s/veh]	22.74	46.01	19.20	26.28	61.66	17.90	26.43	30.33	31.18	19.75	37.17	38.58
Lane Group LOS	C	D	B	C	F	B	C	C	C	B	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.92	16.45	1.35	2.13	21.01	1.18	3.76	7.74	7.42	1.57	8.57	8.42
50th-Percentile Queue Length [ft]	23.06	411.23	33.82	53.20	525.31	29.62	94.00	193.38	185.60	39.37	214.14	210.46
95th-Percentile Queue Length [veh]	1.66	23.10	2.44	3.83	29.30	2.13	6.77	12.30	11.89	2.83	13.37	13.18
95th-Percentile Queue Length [ft]	41.52	577.52	60.88	95.77	732.60	53.31	169.20	307.41	297.31	70.86	334.13	329.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.74	46.01	19.20	26.28	61.66	17.90	26.43	30.65	31.18	19.75	37.77	38.58
Movement LOS	C	D	B	C	F	B	C	C	C	B	D	D
d_A, Approach Delay [s/veh]	43.17			56.37			29.76			35.46		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	43.56											
Intersection LOS	D											
Intersection V/C	0.743											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.521

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	51	720	182	0	1041	120	120	875	70	70	862	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	720	182	0	1041	120	120	875	70	70	862	42
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	182	46	0	282	32	31	228	18	19	233	11
Total Analysis Volume [veh/h]	52	729	184	0	1126	130	125	913	73	76	932	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	46	46	46	46	46	46
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.51	0.51	0.51	0.51	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.12	0.25	0.26	0.24	0.25	0.22	0.25	0.05	0.13	0.26	0.26
s, saturation flow rate [veh/h]	446	1863	1696	3547	1708	581	3618	1523	608	1900	1852
c, Capacity [veh/h]	153	714	651	1360	655	264	1860	783	278	977	952
d1, Uniform Delay [s]	35.58	22.92	23.10	22.39	22.65	26.76	14.20	11.15	23.43	14.33	14.38
k, delay calibration	0.11	0.14	0.15	0.11	0.12	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	1.33	1.67	0.46	1.18	5.97	0.93	0.24	2.43	1.86	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.66	0.68	0.62	0.64	0.47	0.49	0.09	0.27	0.50	0.51
d, Delay for Lane Group [s/veh]	36.88	24.25	24.77	22.84	23.83	32.73	15.13	11.39	25.86	16.19	16.32
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.12	8.20	7.75	6.95	7.16	2.70	5.89	0.76	1.38	6.51	6.44
50th-Percentile Queue Length [ft]	27.89	205.08	193.82	173.85	179.10	67.45	147.29	19.03	34.56	162.65	160.99
95th-Percentile Queue Length [veh]	2.01	12.90	12.32	11.28	11.55	4.86	9.87	1.37	2.49	10.69	10.60
95th-Percentile Queue Length [ft]	50.20	322.51	307.98	281.97	288.84	121.41	246.81	34.25	62.21	267.23	265.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.88	24.43	24.77	0.00	23.10	23.83	32.73	15.13	11.39	25.86	16.25	16.32
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.17			23.17			16.86			16.95		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.52											
Intersection LOS	C											
Intersection V/C	0.521											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	69.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.834

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	162	905	85	210	1247	130	300	1240	240	160	1026	144
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	162	905	85	210	1247	130	300	1240	240	160	1026	144
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	245	23	58	344	36	77	317	61	42	268	38
Total Analysis Volume [veh/h]	176	981	92	232	1375	143	307	1267	245	167	1072	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	55	12	38	55	12	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.46	0.10	0.32	0.46	0.10	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.19	0.06	0.07	0.27	0.09	0.17	0.35	0.17	0.09	0.30	0.10
s, saturation flow rate [veh/h]	1810	5074	1572	3445	5074	1516	1810	3618	1438	1774	3618	1518
c, Capacity [veh/h]	187	1628	735	356	1628	709	187	1154	670	183	1154	484
d1, Uniform Delay [s]	53.47	34.32	18.08	51.75	37.98	18.79	53.83	40.88	20.65	53.28	39.56	30.91
k, delay calibration	0.24	0.50	0.50	0.11	0.50	0.50	0.50	0.20	0.50	0.22	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	32.51	1.66	0.35	2.01	5.56	0.64	311.21	50.13	1.54	26.45	7.60	0.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.94	0.60	0.13	0.65	0.84	0.20	1.64	1.10	0.37	0.91	0.93	0.31
d, Delay for Lane Group [s/veh]	85.97	35.99	18.43	53.76	43.54	19.43	365.04	91.02	22.20	79.73	47.16	31.69
Lane Group LOS	F	D	B	D	D	B	F	F	C	E	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.91	8.17	1.50	3.46	13.27	2.48	21.76	24.63	4.63	6.29	16.13	3.39
50th-Percentile Queue Length [ft]	172.80	204.34	37.59	86.49	331.73	61.90	544.09	615.85	115.63	157.14	403.33	84.69
95th-Percentile Queue Length [veh]	11.22	12.86	2.71	6.23	19.24	4.46	34.44	34.80	8.15	10.40	22.72	6.10
95th-Percentile Queue Length [ft]	280.59	321.56	67.66	155.67	481.08	111.42	860.95	870.00	203.81	259.94	568.01	152.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	85.97	35.99	18.43	53.76	43.54	19.43	365.04	91.02	22.20	79.73	47.16	31.69
Movement LOS	F	D	B	D	D	B	F	F	C	E	D	C
d_A, Approach Delay [s/veh]	41.74			42.93			128.00			49.39		
Approach LOS	D			D			F			D		
d_I, Intersection Delay [s/veh]	69.06											
Intersection LOS	E											
Intersection V/C	0.834											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	176.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.133

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	2006	870	711	1613
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	2006	870	711	1613
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	516	224	194	440
Total Analysis Volume [veh/h]	0	0	2064	895	776	1760
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	35	35	45	85
g / C, Green / Cycle	0.39	0.39	0.50	0.95
(v / s)_i Volume / Saturation Flow Rate	0.65	0.63	0.49	0.55
s, saturation flow rate [veh/h]	3192	1421	1597	3192
c, Capacity [veh/h]	1256	559	805	3025
d1, Uniform Delay [s]	27.27	27.27	21.52	0.27
k, delay calibration	0.50	0.50	0.37	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	292.85	278.18	19.83	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.64	1.60	0.96	0.58
d, Delay for Lane Group [s/veh]	320.12	305.46	41.35	1.10
Lane Group LOS	F	F	D	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	63.80	54.54	18.47	0.35
50th-Percentile Queue Length [ft]	1595.06	1363.56	461.79	8.66
95th-Percentile Queue Length [veh]	99.84	85.59	25.52	0.62
95th-Percentile Queue Length [ft]	2496.02	2139.75	638.00	15.58

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	320.12	305.46	41.35	1.10
Movement LOS			F	F	D	A
d_A, Approach Delay [s/veh]	0.00		315.69		13.41	
Approach LOS	A		F		B	
d_I, Intersection Delay [s/veh]	176.19					
Intersection LOS	F					
Intersection V/C	1.133					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	58.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.863

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	60	1732	60	87	1536	60	180	370	93	90	310	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1732	60	87	1536	60	180	370	93	90	310	130
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	469	16	24	427	17	51	105	26	24	82	35
Total Analysis Volume [veh/h]	65	1877	65	97	1706	67	204	419	105	96	329	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	81	81	81	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.54	0.54	0.54	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.25	0.59	0.05	0.24	0.53	0.05	0.25	0.13	0.08	0.11	0.15	0.17
s, saturation flow rate [veh/h]	257	3192	1425	398	3192	1384	823	3192	1352	860	1676	1351
c, Capacity [veh/h]	75	1722	769	205	2030	880	173	966	409	207	508	409
d1, Uniform Delay [s]	71.58	34.51	16.65	35.04	21.35	10.44	66.72	41.94	39.50	56.12	42.62	43.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.11	0.11	0.11	0.11	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	69.97	50.61	0.22	7.61	4.41	0.17	112.88	0.31	0.33	1.62	0.70	1.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	1.09	0.08	0.47	0.84	0.08	1.18	0.43	0.26	0.46	0.48	0.55
d, Delay for Lane Group [s/veh]	141.55	85.13	16.87	42.65	25.75	10.61	179.59	42.24	39.82	57.75	43.33	44.99
Lane Group LOS	F	F	B	D	C	B	F	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	3.99	42.56	1.16	1.72	23.74	0.91	12.14	6.35	3.02	3.45	7.55	7.16
50th-Percentile Queue Length [ft]	99.65	1064.06	28.89	43.12	593.55	22.65	303.44	158.73	75.38	86.32	188.79	178.93
95th-Percentile Queue Length [veh]	7.17	57.12	2.08	3.10	31.73	1.63	19.51	10.48	5.43	6.21	12.06	11.54
95th-Percentile Queue Length [ft]	179.37	1428.12	52.00	77.62	793.33	40.76	487.79	262.05	135.68	155.37	301.46	288.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	141.55	85.13	16.87	42.65	25.75	10.61	179.59	42.24	39.82	57.75	43.76	44.99
Movement LOS	F	F	B	D	C	B	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	84.74			26.09			80.38			46.45		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	58.73											
Intersection LOS	E											
Intersection V/C	0.863											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	83	997	70	100	1263	70	110	520	90	120	480	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	997	70	100	1263	70	110	520	90	120	480	87
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	254	18	27	339	19	28	134	23	31	122	22
Total Analysis Volume [veh/h]	84	1014	71	107	1357	75	113	534	92	122	489	89
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	47	47	47	47	47	47	54	54	54	54	54
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.49	0.49	0.49	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.25	0.23	0.23	0.23	0.30	0.30	0.15	0.32	0.07	0.16	0.36
s, saturation flow rate [veh/h]	335	3192	1615	466	3192	1627	749	1676	1403	780	1628
c, Capacity [veh/h]	127	1368	692	185	1368	697	192	818	684	232	794
d1, Uniform Delay [s]	47.57	23.20	23.23	39.43	25.55	25.59	44.68	21.16	15.43	40.33	22.36
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.21
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	23.86	1.45	2.88	12.49	2.91	5.65	1.06	1.23	0.03	0.69	2.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

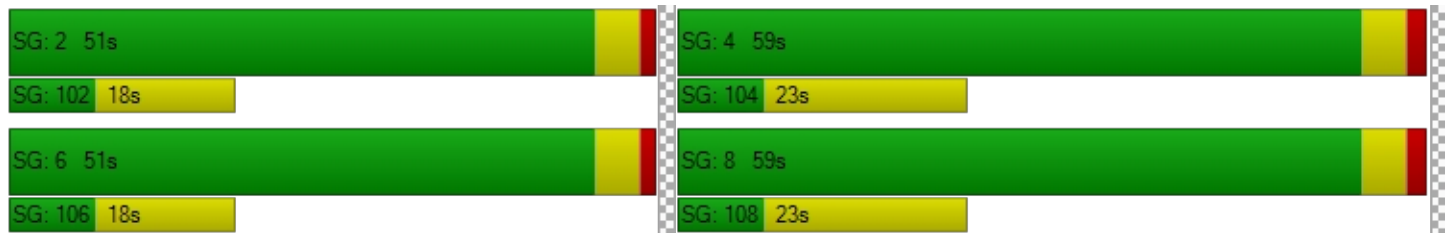
X, volume / capacity	0.66	0.53	0.53	0.58	0.69	0.69	0.59	0.65	0.13	0.53	0.73
d, Delay for Lane Group [s/veh]	71.42	24.65	26.11	51.92	28.46	31.23	45.74	22.39	15.47	41.02	24.91
Lane Group LOS	E	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	3.17	7.04	7.45	3.40	10.38	11.15	3.05	10.28	1.26	3.10	12.00
50th-Percentile Queue Length [ft]	79.17	176.11	186.17	84.89	259.41	278.79	76.25	256.99	31.57	77.57	299.99
95th-Percentile Queue Length [veh]	5.70	11.40	11.92	6.11	15.66	16.63	5.49	15.54	2.27	5.59	17.68
95th-Percentile Queue Length [ft]	142.51	284.93	298.05	152.81	391.48	415.71	137.25	388.44	56.82	139.63	442.02

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	71.42	25.07	26.11	51.92	29.30	31.23	45.74	22.39	15.47	41.02	24.91	24.91
Movement LOS	E	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	28.46			30.97			25.10			27.72		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.67											
Intersection LOS	C											
Intersection V/C	0.653											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	88.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.089

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	330	300	60	470	60	830	1626	100	30	723	290
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	330	300	60	470	60	830	1626	100	30	723	290
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	94	85	18	143	18	221	433	27	8	202	81
Total Analysis Volume [veh/h]	23	376	342	73	572	73	884	1733	107	34	808	324
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	41	32	52	41	28	28	69	62	62	69	49	62
g / C, Green / Cycle	0.35	0.27	0.43	0.35	0.24	0.24	0.58	0.52	0.52	0.58	0.41	0.52
(v / s)_j Volume / Saturation Flow Rate	0.02	0.12	0.22	0.07	0.20	0.20	0.90	0.48	0.50	0.09	0.22	0.20
s, saturation flow rate [veh/h]	1004	3080	1569	1100	1618	1546	978	1900	1858	371	3618	1581
c, Capacity [veh/h]	278	822	688	366	384	367	535	978	956	182	1484	829
d1, Uniform Delay [s]	29.26	36.77	24.21	28.48	43.81	43.89	32.73	27.39	27.99	27.20	26.88	17.09
k, delay calibration	0.11	0.11	0.50	0.11	0.16	0.16	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.40	2.56	0.26	7.69	8.54	301.39	17.55	21.23	2.25	1.44	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

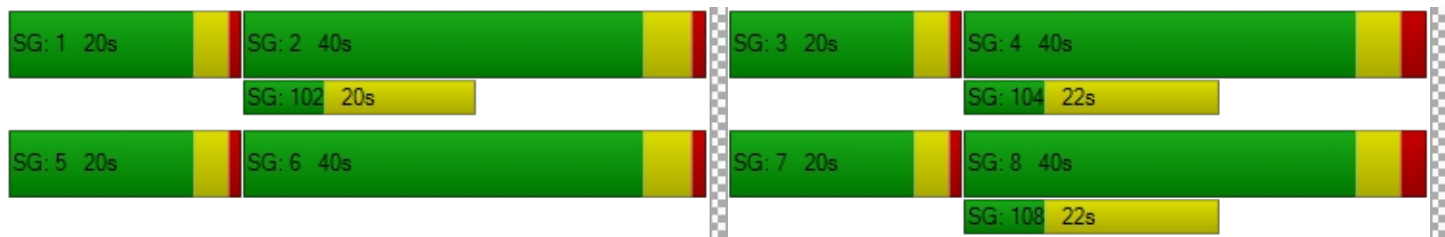
X, volume / capacity	0.08	0.46	0.50	0.20	0.86	0.86	1.65	0.94	0.96	0.19	0.54	0.39
d, Delay for Lane Group [s/veh]	29.38	37.17	26.77	28.75	51.50	52.44	334.13	44.95	49.23	29.45	28.32	18.48
Lane Group LOS	C	D	C	C	D	D	F	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.45	4.62	7.33	1.51	10.11	9.84	53.13	27.62	28.99	0.50	8.90	5.51
50th-Percentile Queue Length [ft]	11.37	115.46	183.13	37.63	252.87	246.11	1328.36	690.42	724.72	12.53	222.38	137.85
95th-Percentile Queue Length [veh]	0.82	8.14	11.76	2.71	15.33	14.99	86.90	36.24	37.82	0.90	13.79	9.37
95th-Percentile Queue Length [ft]	20.47	203.57	294.09	67.74	383.27	374.75	2172.50	905.88	945.47	22.55	344.67	234.13

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.38	37.17	26.77	28.75	51.90	52.44	334.13	46.96	49.23	29.45	28.32	18.48
Movement LOS	C	D	C	C	D	D	F	D	D	C	C	B
d_A, Approach Delay [s/veh]	32.13			49.60			140.24			25.62		
Approach LOS	C			D			F			C		
d_I, Intersection Delay [s/veh]	88.11											
Intersection LOS	F											
Intersection V/C	1.089											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.595

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	90	83	70	100	50	70	866	10	20	780	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	90	83	70	100	50	70	866	10	20	780	10
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	26	24	20	29	14	19	239	3	5	208	3
Total Analysis Volume [veh/h]	24	106	98	80	115	57	77	955	11	21	830	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	59	59	59	59
g / C, Green / Cycle	0.24	0.24	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.16	0.22	0.37	0.37	0.28	0.28
s, saturation flow rate [veh/h]	1457	1123	1297	1519	1600	1516
c, Capacity [veh/h]	398	325	896	994	1089	993
d1, Uniform Delay [s]	30.34	33.28	7.87	8.51	7.28	7.41
k, delay calibration	0.11	0.20	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	7.15	2.30	2.33	1.12	1.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.57	0.77	0.54	0.57	0.41	0.42
d, Delay for Lane Group [s/veh]	31.64	40.42	10.17	10.84	8.40	8.73
Lane Group LOS	C	D	B	B	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.44	5.93	4.30	5.59	3.67	3.58
50th-Percentile Queue Length [ft]	111.07	148.14	107.43	139.75	91.63	89.39
95th-Percentile Queue Length [veh]	7.90	9.92	7.70	9.47	6.60	6.44
95th-Percentile Queue Length [ft]	197.49	247.94	192.42	236.69	164.93	160.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.64	31.64	31.64	40.42	40.42	40.42	10.17	10.56	10.84	8.40	8.56	8.73
Movement LOS	C	C	C	D	D	D	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	31.64			40.42			10.53			8.56		
Approach LOS	C			D			B			A		
d_I, Intersection Delay [s/veh]	14.99											
Intersection LOS	B											
Intersection V/C	0.595											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	49.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	583	662	0	72	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	583	662	0	72	35
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	154	182	0	21	10
Total Analysis Volume [veh/h]	0	614	729	0	82	40
Pedestrian Volume [ped/h]	6		5		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.52	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	49.67	15.00
Movement LOS		A	A		E	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	2.53	0.33
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	63.37	8.28
d_A, Approach Delay [s/veh]	0.00		0.00		38.30	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	3.19					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	8	500	423	16	103	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	500	423	16	103	78
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	134	117	4	49	37
Total Analysis Volume [veh/h]	8	538	467	16	194	147
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.46	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.12		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	A					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	266	10	10	251	30	10	0	0	10	10	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	266	10	10	251	30	10	0	0	10	10	32
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	75	3	3	66	8	10	0	0	3	3	11
Total Analysis Volume [veh/h]	23	301	11	10	263	31	40	0	0	14	14	44
Pedestrian Volume [ped/h]	33			30			12			7		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	792	793	634	706
Degree of Utilization, x	0.42	0.38	0.06	0.10

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.12	1.81	0.20	0.34
95th-Percentile Queue Length [ft]	53.07	45.23	5.04	8.47
Approach Delay [s/veh]	10.85	10.32	9.06	8.67
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.33			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	21	252	0	10	236	20	10	10	10	10	0	71
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	252	0	10	236	20	10	10	10	10	0	71
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	79	0	3	62	5	7	7	7	4	0	27
Total Analysis Volume [veh/h]	26	315	0	11	250	21	29	29	29	15	0	110
Pedestrian Volume [ped/h]	8			11			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	738	735	652	707
Degree of Utilization, x	0.46	0.38	0.13	0.18

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.45	1.81	0.46	0.64
95th-Percentile Queue Length [ft]	61.31	45.26	11.48	15.95
Approach Delay [s/veh]	11.99	10.92	9.37	9.18
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.93			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	18	3	8	5	6	217	29	37	295	11
Total Analysis Volume [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	86	86	96	88	88
g / C, Green / Cycle	0.13	0.13	0.13	0.13	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_j Volume / Saturation Flow Rate	0.03	0.05	0.01	0.03	0.04	0.27	0.27	0.22	0.33	0.33
s, saturation flow rate [veh/h]	1306	1483	1286	1706	529	1870	1776	667	1870	1842
c, Capacity [veh/h]	166	186	141	214	454	1343	1276	563	1379	1358
d1, Uniform Delay [s]	52.12	48.19	53.17	47.24	3.52	6.51	6.54	3.54	6.17	6.18
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.48	0.10	0.20	0.21	0.80	0.85	1.13	1.05	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.22	0.38	0.09	0.23	0.05	0.37	0.38	0.26	0.45	0.45
d, Delay for Lane Group [s/veh]	52.37	48.67	53.26	47.44	3.73	7.31	7.39	4.66	7.22	7.26
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.07	1.98	0.35	1.34	0.12	4.77	4.61	0.80	5.79	5.75
50th-Percentile Queue Length [ft]	26.68	49.56	8.67	33.41	2.92	119.36	115.36	19.88	144.72	143.78
95th-Percentile Queue Length [veh]	1.92	3.57	0.62	2.41	0.21	8.36	8.14	1.43	9.73	9.68
95th-Percentile Queue Length [ft]	48.03	89.21	15.61	60.14	5.25	208.94	203.43	35.78	243.36	242.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.37	48.67	48.67	53.26	47.44	47.44	3.73	7.35	7.39	4.66	7.24	7.26
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	49.94			48.59			7.27			6.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.90											
Intersection LOS	A											
Intersection V/C	0.381											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	144.83	464.95	578.06	541.27
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.238	2.020	2.804	2.783
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.738	1.660	2.390	2.690
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.138

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	24	86	0	729	551	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	86	0	729	551	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	22	0	182	138	0
Total Analysis Volume [veh/h]	24	86	0	729	551	0
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.14	0.17	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.89	13.48	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh]	0.47	0.60	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	11.67	15.03	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.84		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.33					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	2.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	1	235	0	0	366	5
Total Analysis Volume [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	0	0		111	106	106	111	105	105
g / C, Green / Cycle	0.00	0.00		0.92	0.88	0.88	0.92	0.88	0.88
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00		0.01	0.25	0.25	0.00	0.40	0.40
s, saturation flow rate [veh/h]	1781	1870		404	1870	1870	624	1870	1860
c, Capacity [veh/h]	1	1		430	1653	1653	638	1637	1628
d1, Uniform Delay [s]	0.00	0.00		0.87	1.08	1.08	0.00	1.55	1.55
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00		0.05	0.43	0.43	0.00	0.91	0.92
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.00	0.00		0.01	0.28	0.28	0.00	0.45	0.45
d, Delay for Lane Group [s/veh]	0.00	0.00		0.92	1.51	1.51	0.00	2.46	2.47
Lane Group LOS	A	A		A	A	A	A	A	A
Critical Lane Group	No	No		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.00	0.00		0.01	0.80	0.80	0.00	1.97	1.97
50th-Percentile Queue Length [ft]	0.00	0.00		0.15	20.12	20.12	0.00	49.15	49.13
95th-Percentile Queue Length [veh]	0.00	0.00		0.01	1.45	1.45	0.00	3.54	3.54
95th-Percentile Queue Length [ft]	0.00	0.00		0.26	36.21	36.21	0.00	88.48	88.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.92	1.51	1.51	0.00	2.46	2.47
Movement LOS	A	A	A				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			1.51			2.46		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.09											
Intersection LOS	A											
Intersection V/C	0.398											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	341.31	194.95	386.92	341.31
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	1.954	1.466	2.784	2.786
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.340	2.782
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	2	1	1	601	704	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	1	601	704	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	150	176	1
Total Analysis Volume [veh/h]	2	1	1	601	704	4
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	26.70	13.64	9.12	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.04	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.90	0.18	0.09	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.35		0.02		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.381

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	18	3	8	5	6	217	29	37	295	11
Total Analysis Volume [veh/h]	37	0	71	12	31	18	23	869	115	147	1181	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	86	86	96	88	88
g / C, Green / Cycle	0.13	0.13	0.13	0.13	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.03	0.05	0.01	0.03	0.04	0.27	0.27	0.22	0.33	0.33
s, saturation flow rate [veh/h]	1306	1483	1286	1706	529	1870	1776	667	1870	1842
c, Capacity [veh/h]	166	186	141	214	454	1343	1276	563	1379	1358
d1, Uniform Delay [s]	52.12	48.19	53.17	47.24	3.52	6.51	6.54	3.54	6.17	6.18
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.48	0.10	0.20	0.21	0.80	0.85	1.13	1.05	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.22	0.38	0.09	0.23	0.05	0.37	0.38	0.26	0.45	0.45
d, Delay for Lane Group [s/veh]	52.37	48.67	53.26	47.44	3.73	7.31	7.39	4.66	7.22	7.26
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.07	1.98	0.35	1.34	0.12	4.77	4.61	0.80	5.79	5.75
50th-Percentile Queue Length [ft/ln]	26.68	49.56	8.67	33.41	2.92	119.36	115.36	19.88	144.72	143.78
95th-Percentile Queue Length [veh/ln]	1.92	3.57	0.62	2.41	0.21	8.36	8.14	1.43	9.73	9.68
95th-Percentile Queue Length [ft/ln]	48.03	89.21	15.61	60.14	5.25	208.94	203.43	35.78	243.36	242.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.37	48.67	48.67	53.26	47.44	47.44	3.73	7.35	7.39	4.66	7.24	7.26
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	49.94			48.59			7.27			6.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.90											
Intersection LOS	A											
Intersection V/C	0.381											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	144.83	464.95	578.06	541.27
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.238	2.020	2.804	2.783
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.738	1.660	2.390	2.690
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.138

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	24	86	0	729	551	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	86	0	729	551	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	22	0	182	138	0
Total Analysis Volume [veh/h]	24	86	0	729	551	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.14	0.17	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.89	13.48	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh/ln]	0.47	0.60	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.67	15.03	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.84		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.33					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	4.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	1	235	0	0	366	5
Total Analysis Volume [veh/h]	0	0	0	0	0	0	5	941	0	0	1464	18
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	8	8		103	98	98	103	97	97
g / C, Green / Cycle	0.06	0.06		0.86	0.82	0.82	0.86	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00		0.01	0.25	0.25	0.00	0.40	0.40
s, saturation flow rate [veh/h]	1781	1870		408	1870	1870	626	1870	1860
c, Capacity [veh/h]	116	122		392	1532	1532	587	1516	1508
d1, Uniform Delay [s]	0.00	0.00		2.28	2.61	2.61	0.00	3.57	3.57
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00		0.06	0.52	0.52	0.00	1.13	1.14
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.00	0.00		0.01	0.31	0.31	0.00	0.49	0.49
d, Delay for Lane Group [s/veh]	0.00	0.00		2.34	3.13	3.13	0.00	4.70	4.72
Lane Group LOS	A	A		A	A	A	A	A	A
Critical Lane Group	No	No		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00		0.02	2.18	2.18	0.00	4.68	4.68
50th-Percentile Queue Length [ft/ln]	0.00	0.00		0.39	54.58	54.58	0.00	117.10	116.98
95th-Percentile Queue Length [veh/ln]	0.00	0.00		0.03	3.93	3.93	0.00	8.23	8.23
95th-Percentile Queue Length [ft/ln]	0.00	0.00		0.70	98.24	98.24	0.00	205.84	205.66



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	2.34	3.13	3.13	0.00	4.71	4.72
Movement LOS	A	A	A				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			3.13			4.71		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.09											
Intersection LOS	A											
Intersection V/C	0.398											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	341.31	195.77	386.92	341.31
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	1.954	1.465	2.784	2.786
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.340	2.782
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	2	1	1	601	704	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	1	1	601	704	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	150	176	1
Total Analysis Volume [veh/h]	2	1	1	601	704	4
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	26.70	13.64	9.12	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.90	0.18	0.09	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.35		0.02		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.06					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	57.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.056

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↕↔			↕↔			↔↕↔			↔↕↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	83	245	50	166	70	377	440	80	20	400	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	83	245	50	166	70	377	440	80	20	400	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	25	73	16	53	22	103	121	22	6	114	11
Total Analysis Volume [veh/h]	48	99	294	64	212	89	413	482	88	23	457	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	30	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.33	0.56	0.56	0.03	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.49	0.19	0.59	0.06	0.23	0.25	0.06	0.02	0.24	0.04
s, saturation flow rate [veh/h]	297	1534	470	1505	1810	1900	1449	1509	1900	1095
c, Capacity [veh/h]	143	977	192	456	605	1065	812	52	495	286
d1, Uniform Delay [s]	29.73	7.33	27.92	23.25	25.84	11.64	9.25	42.59	32.37	25.66
k, delay calibration	0.50	0.07	0.50	0.04	0.50	0.50	0.50	0.04	0.18	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	82.56	0.11	225.52	0.08	6.14	1.39	0.27	2.18	11.53	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

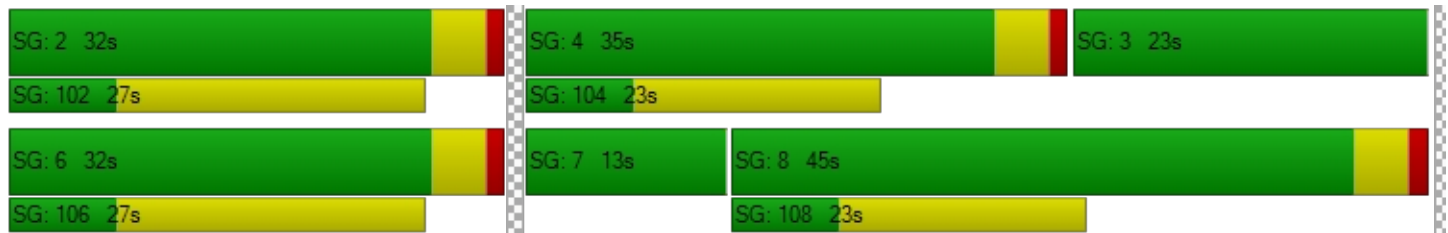
X, volume / capacity	1.03	0.30	1.44	0.20	0.68	0.45	0.11	0.44	0.92	0.16
d, Delay for Lane Group [s/veh]	112.29	7.44	253.44	23.32	31.98	13.03	9.52	44.77	43.90	25.76
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.48	2.36	15.04	1.36	8.41	5.65	0.82	0.53	10.97	0.76
50th-Percentile Queue Length [ft]	162.00	59.06	376.07	34.05	210.15	141.33	20.53	13.20	274.24	18.91
95th-Percentile Queue Length [veh]	10.81	4.25	25.42	2.45	13.16	9.55	1.48	0.95	16.40	1.36
95th-Percentile Queue Length [ft]	270.26	106.31	635.58	61.30	329.03	238.81	36.95	23.76	410.03	34.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	112.29	112.29	7.44	253.44	253.44	23.32	31.98	13.03	9.52	44.77	43.90	25.76
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	42.39			197.33			20.68			42.35		
Approach LOS	D			F			C			D		
d_I, Intersection Delay [s/veh]	57.59											
Intersection LOS	E											
Intersection V/C	1.056											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	50	895	70	170	747	40	250	350	250	40	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	895	70	170	747	40	250	350	250	40	190	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	244	19	45	196	11	67	93	67	12	55	9
Total Analysis Volume [veh/h]	54	974	76	179	785	42	267	374	267	47	221	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	42	42	42	39	39	39	24	24	24
g / C, Green / Cycle	0.33	0.33	0.33	0.46	0.46	0.46	0.44	0.44	0.44	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.05	0.20	0.22	0.03	0.19	0.20	0.17	0.05	0.07	0.07
s, saturation flow rate [veh/h]	684	3618	1449	877	3618	1437	1371	1900	1537	1005	1900	1776
c, Capacity [veh/h]	190	1194	478	381	1671	664	651	828	670	181	501	469
d1, Uniform Delay [s]	34.47	27.65	21.33	18.37	16.65	13.43	17.02	17.85	17.35	38.22	26.19	26.27
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.74	6.20	0.71	4.10	0.95	0.18	1.90	0.14	0.14	0.28	0.10	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.82	0.16	0.47	0.47	0.06	0.41	0.45	0.40	0.26	0.26	0.27
d, Delay for Lane Group [s/veh]	38.20	33.85	22.04	22.47	17.60	13.61	18.92	17.99	17.49	38.50	26.29	26.39
Lane Group LOS	D	C	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.26	10.26	1.21	2.49	5.40	0.48	3.86	5.26	3.66	0.97	2.14	2.10
50th-Percentile Queue Length [ft]	31.46	256.61	30.15	62.20	135.04	12.02	96.56	131.61	91.43	24.24	53.55	52.40
95th-Percentile Queue Length [veh]	2.27	15.52	2.17	4.48	9.21	0.87	6.95	9.03	6.58	1.75	3.86	3.77
95th-Percentile Queue Length [ft]	56.63	387.97	54.26	111.96	230.33	21.64	173.80	225.69	164.57	43.64	96.38	94.31

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.20	33.85	22.04	22.47	17.60	13.61	18.92	17.99	17.49	38.50	26.33	26.39
Movement LOS	D	C	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	33.25			18.30			18.12			28.23		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	24.12											
Intersection LOS	C											
Intersection V/C	0.530											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.394

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔			↔↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	156	130	70	171	50	140	820	60	20	450	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	156	130	70	171	50	140	820	60	20	450	30
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	44	37	20	49	14	37	214	16	6	135	9
Total Analysis Volume [veh/h]	11	177	147	80	195	57	146	857	63	24	542	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	51	51	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.65	0.56	0.56	0.65	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.10	0.10	0.07	0.14	0.15	0.25	0.25	0.03	0.15	0.16
s, saturation flow rate [veh/h]	1847	1466	1176	1798	1004	1900	1828	735	1900	1836
c, Capacity [veh/h]	503	366	205	448	687	1068	1028	499	991	958
d1, Uniform Delay [s]	28.13	28.17	38.57	29.48	6.59	11.43	11.49	6.81	12.18	12.21
k, delay calibration	0.04	0.04	0.04	0.04	0.07	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.26	0.45	0.41	0.09	1.30	1.38	0.18	0.76	0.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

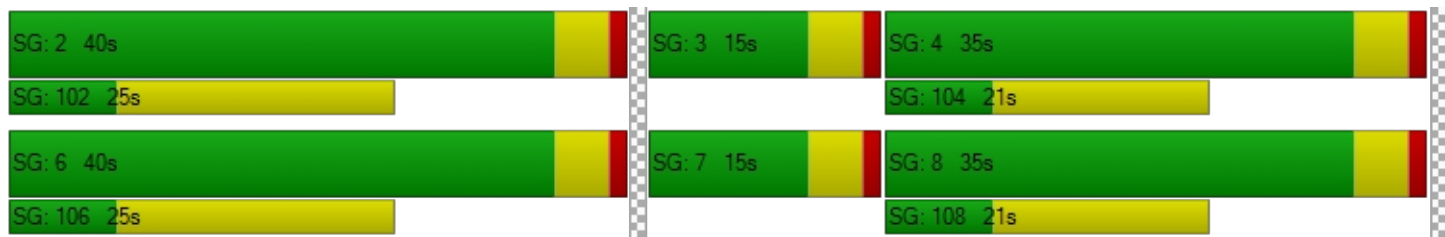
X, volume / capacity	0.37	0.40	0.39	0.56	0.21	0.44	0.44	0.05	0.29	0.30
d, Delay for Lane Group [s/veh]	28.30	28.44	39.02	29.89	6.68	12.73	12.87	6.99	12.93	13.01
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.29	2.58	1.67	4.63	0.96	5.37	5.28	0.17	3.34	3.30
50th-Percentile Queue Length [ft]	82.15	64.53	41.87	115.84	23.98	134.19	132.06	4.23	83.59	82.46
95th-Percentile Queue Length [veh]	5.91	4.65	3.01	8.16	1.73	9.17	9.05	0.30	6.02	5.94
95th-Percentile Queue Length [ft]	147.86	116.15	75.37	204.09	43.16	229.18	226.30	7.62	150.47	148.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.30	28.30	28.44	39.02	29.89	29.89	6.68	12.79	12.87	6.99	12.97	13.01
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	28.36			32.09			11.96			12.73		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.37											
Intersection LOS	B											
Intersection V/C	0.394											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↱			↵↱			↵↱			↵↱		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	526	220	86	388	190	130	820	175	50	560	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	526	220	86	388	190	130	820	175	50	560	60
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	139	58	23	103	50	34	212	45	14	154	17
Total Analysis Volume [veh/h]	21	557	233	91	411	201	134	846	181	55	617	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	41	41	41	70	59	59	70	58	58
g / C, Green / Cycle	0.25	0.25	0.25	0.34	0.34	0.34	0.58	0.49	0.49	0.58	0.48	0.48
(v / s)_j Volume / Saturation Flow Rate	0.02	0.22	0.23	0.10	0.22	0.13	0.15	0.28	0.29	0.08	0.18	0.18
s, saturation flow rate [veh/h]	990	1900	1619	949	1900	1495	913	1900	1746	712	1900	1819
c, Capacity [veh/h]	112	473	403	259	653	513	525	934	859	386	918	879
d1, Uniform Delay [s]	55.04	43.25	43.99	30.73	32.97	29.85	12.52	21.46	21.67	13.83	19.59	19.64
k, delay calibration	0.04	0.16	0.19	0.18	0.04	0.04	0.31	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	7.58	15.39	1.36	0.38	0.18	0.72	2.48	2.85	0.77	1.19	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

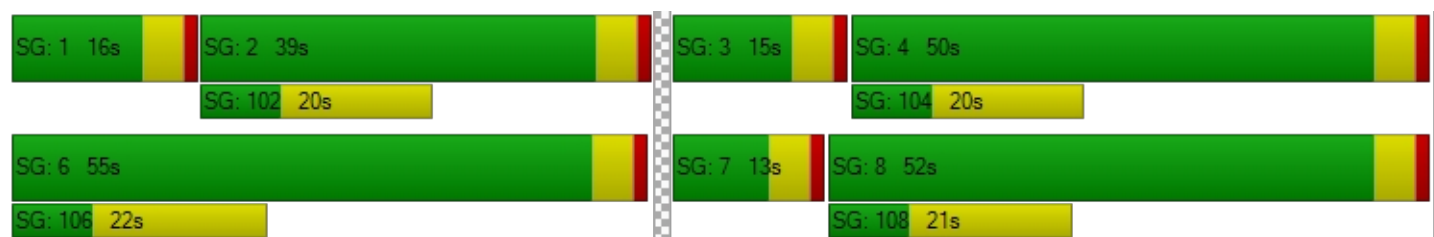
X, volume / capacity	0.19	0.88	0.93	0.35	0.63	0.39	0.26	0.57	0.58	0.14	0.38	0.38
d, Delay for Lane Group [s/veh]	55.34	50.83	59.38	32.09	33.34	30.03	13.25	23.94	24.52	14.60	20.78	20.91
Lane Group LOS	E	D	E	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.62	12.75	12.52	1.92	10.03	4.44	1.71	10.93	10.46	0.71	6.38	6.21
50th-Percentile Queue Length [ft]	15.62	318.63	313.09	47.94	250.70	110.91	42.85	273.26	261.60	17.84	159.59	155.29
95th-Percentile Queue Length [veh]	1.12	18.60	18.33	3.45	15.22	7.89	3.09	16.35	15.77	1.28	10.53	10.30
95th-Percentile Queue Length [ft]	28.12	465.01	458.18	86.30	380.54	197.26	77.14	408.81	394.23	32.10	263.18	257.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.34	53.01	59.38	32.09	33.34	30.03	13.25	24.16	24.52	14.60	20.84	20.91
Movement LOS	E	D	E	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	54.90			32.23			22.95			20.38		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	31.90											
Intersection LOS	C											
Intersection V/C	0.569											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	90	400	100	130	270	80	150	975	160	50	816	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	400	100	130	270	80	150	975	160	50	816	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	115	29	36	76	22	39	251	41	13	217	8
Total Analysis Volume [veh/h]	103	459	115	146	303	90	155	1006	165	53	869	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	10	46	46	12	65	65	48	48	48
g / C, Green / Cycle	0.26	0.26	0.26	0.09	0.38	0.38	0.10	0.54	0.54	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.10	0.24	0.08	0.08	0.16	0.06	0.09	0.31	0.33	0.11	0.24	0.24
s, saturation flow rate [veh/h]	1045	1900	1397	1810	1900	1433	1810	1900	1731	487	1900	1863
c, Capacity [veh/h]	190	491	361	157	729	549	183	1026	935	136	761	746
d1, Uniform Delay [s]	51.06	43.51	35.96	54.39	27.12	24.32	53.01	18.53	18.98	47.91	28.30	28.37
k, delay calibration	0.04	0.20	0.04	0.09	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	14.30	0.19	16.84	0.14	0.05	4.18	2.42	3.00	8.19	3.42	3.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.54	0.94	0.32	0.93	0.42	0.16	0.85	0.58	0.61	0.39	0.60	0.60
d, Delay for Lane Group [s/veh]	51.96	57.81	36.14	71.23	27.26	24.38	57.19	20.96	21.97	56.10	31.72	31.91
Lane Group LOS	D	E	D	E	C	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	3.03	15.02	2.73	5.07	6.31	1.68	4.80	11.56	11.44	1.81	10.90	10.81
50th-Percentile Queue Length [ft]	75.67	375.56	68.15	126.86	157.82	42.05	120.04	289.02	285.96	45.26	272.53	270.26
95th-Percentile Queue Length [veh]	5.45	21.38	4.91	8.77	10.43	3.03	8.40	17.14	16.99	3.26	16.32	16.20
95th-Percentile Queue Length [ft]	136.21	534.47	122.67	219.22	260.83	75.69	209.88	428.43	424.63	81.48	407.91	405.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.96	57.81	36.14	71.23	27.26	24.38	57.19	21.37	21.97	56.10	31.81	31.91
Movement LOS	D	E	D	E	C	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.24			38.69			25.63			33.17		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	35.05											
Intersection LOS	D											
Intersection V/C	0.653											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└└			┌└└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	60	150	156	130	100	170	1215	220	30	946	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	60	150	156	130	100	170	1215	220	30	946	30
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	17	42	44	41	32	45	322	58	8	263	8
Total Analysis Volume [veh/h]	23	67	168	175	164	126	180	1288	233	33	1051	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	14	71	71	5	62	62
g / C, Green / Cycle	0.26	0.26	0.11	0.59	0.59	0.04	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.14	0.24	0.10	0.41	0.43	0.02	0.45	0.29
s, saturation flow rate [veh/h]	1644	1200	1810	1900	1768	1810	1200	1871
c, Capacity [veh/h]	419	306	206	1123	1045	71	619	966
d1, Uniform Delay [s]	38.85	43.91	52.25	16.85	17.43	56.37	25.70	19.71
k, delay calibration	0.04	0.28	0.19	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	27.85	17.42	3.41	4.27	1.77	16.32	2.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

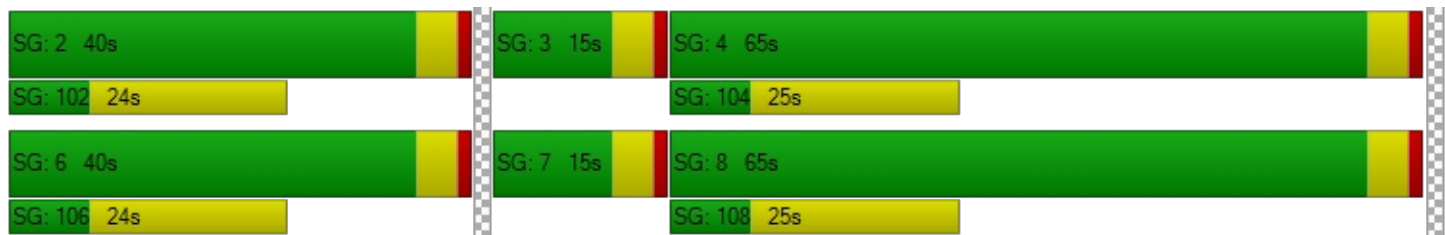
X, volume / capacity	0.56	0.95	0.87	0.69	0.72	0.47	0.88	0.56
d, Delay for Lane Group [s/veh]	39.29	71.76	69.66	20.25	21.70	58.13	42.02	22.04
Lane Group LOS	D	E	E	C	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.07	10.75	6.32	14.96	15.28	1.01	16.03	10.66
50th-Percentile Queue Length [ft]	151.65	268.83	158.01	374.01	382.07	25.35	400.77	266.49
95th-Percentile Queue Length [veh]	10.11	16.13	10.44	21.30	21.69	1.83	22.60	16.01
95th-Percentile Queue Length [ft]	252.63	403.28	261.09	532.59	542.35	45.63	564.93	400.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	39.29	39.29	0.00	71.76	71.76	69.66	20.84	21.70	58.13	32.39	22.04
Movement LOS		D	D		E	E	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	39.29			71.76			26.12			32.85		
Approach LOS	D			E			C			C		
d_I, Intersection Delay [s/veh]	33.25											
Intersection LOS	C											
Intersection V/C	0.795											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	71.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.949

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	520	280	860	240	745	0	0	1226	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	520	280	860	240	745	0	0	1226	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	138	74	228	63	196	0	0	318	10
Total Analysis Volume [veh/h]	0	0	0	552	297	912	253	784	0	0	1274	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	R	L	C	C	C
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		35	35	35	35	19	75	52	52
g / C, Green / Cycle		0.30	0.30	0.30	0.30	0.15	0.63	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.23	0.23	0.32	0.29	0.14	0.22	0.49	0.49
s, saturation flow rate [veh/h]		1810	1872	1418	1559	1810	3618	1800	900
c, Capacity [veh/h]		534	552	419	460	279	2272	784	392
d1, Uniform Delay [s]		38.84	38.59	42.25	42.10	49.84	10.58	33.84	33.84
k, delay calibration		0.26	0.24	0.50	0.43	0.20	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		6.13	5.13	70.24	36.81	17.36	0.42	70.16	81.91
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.79	0.77	1.09	0.99	0.91	0.35	1.12	1.12
d, Delay for Lane Group [s/veh]		44.97	43.71	112.4	78.90	67.19	11.00	103.99	115.75
Lane Group LOS		D	D	F	E	E	B	F	F
Critical Lane Group		No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		11.87	11.81	20.00	17.54	8.78	4.89	18.70	19.98
50th-Percentile Queue Length [ft]		296.8	295.1	499.9	438.5	219.56	122.16	467.41	499.40
95th-Percentile Queue Length [veh]		17.52	17.44	28.81	24.41	13.64	8.51	27.83	29.48
95th-Percentile Queue Length [ft]		438.0	436.0	720.2	610.3	341.06	212.80	695.63	737.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	44.68	43.71	95.70	67.19	11.00	0.00	0.00	107.65	115.75
Movement LOS				D	D	F	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			70.94			24.71			107.91		
Approach LOS	A			E			C			F		
d_I, Intersection Delay [s/veh]	71.11											
Intersection LOS	E											
Intersection V/C	0.949											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	115.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.044

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌						⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	190	320	230	0	0	0	0	785	390	550	1316	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	320	230	0	0	0	0	785	390	550	1316	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	96	69	0	0	0	0	209	104	147	351	0
Total Analysis Volume [veh/h]	228	384	276	0	0	0	0	835	415	586	1403	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23		70	70	70	13	88
g / C, Green / Cycle	0.19	0.19	0.19		0.59	0.59	0.59	0.11	0.73
(v / s)_j Volume / Saturation Flow Rate	0.17	0.17	0.17		0.17	0.20	0.63	0.24	0.39
s, saturation flow rate [veh/h]	1834	1729	1581		3618	1558	500	2400	3618
c, Capacity [veh/h]	351	331	303		2116	911	293	260	2647
d1, Uniform Delay [s]	47.36	47.35	47.52		12.49	12.92	24.90	53.49	7.05
k, delay calibration	0.16	0.16	0.17		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.58	12.13	15.22		0.03	0.08	71.89	575.18	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.90	0.90	0.91		0.30	0.34	1.07	2.25	0.53
d, Delay for Lane Group [s/veh]	58.93	59.48	62.73		12.52	13.01	96.79	628.67	7.81
Lane Group LOS	E	E	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	10.20	9.66	9.25		4.05	4.20	13.38	24.72	7.22
50th-Percentile Queue Length [ft]	254.93	241.57	231.28		101.21	105.04	334.50	617.93	180.48
95th-Percentile Queue Length [veh]	15.43	14.76	14.24		7.29	7.56	20.35	40.22	11.63
95th-Percentile Queue Length [ft]	385.86	369.02	355.98		182.18	189.07	508.68	1005.46	290.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.93	59.36	62.73	0.00	0.00	0.00	0.00	12.52	76.10	628.67	7.81	0.00
Movement LOS	E	E	E					B	E	F	A	
d_A, Approach Delay [s/veh]	60.30			0.00			33.71			190.73		
Approach LOS	E			A			C			F		
d_I, Intersection Delay [s/veh]	115.11											
Intersection LOS	F											
Intersection V/C	1.044											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	140	360	60	130	1055	120	80	1046	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	140	360	60	130	1055	120	80	1046	90
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	40	103	17	38	308	35	21	281	24
Total Analysis Volume [veh/h]	107	437	139	160	412	69	152	1233	140	86	1124	97
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	12	34	34	10	52	52	7	49	49
g / C, Green / Cycle	0.07	0.25	0.25	0.10	0.28	0.28	0.09	0.43	0.43	0.06	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.09	0.13	0.13	0.08	0.34	0.09	0.05	0.31	0.06
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1781	1810	3618	1561	1810	3618	1575
c, Capacity [veh/h]	133	476	395	187	533	500	157	1571	678	109	1475	642
d1, Uniform Delay [s]	54.79	43.80	36.98	52.94	35.69	35.79	54.65	29.14	21.10	55.65	30.54	22.43
k, delay calibration	0.04	0.23	0.11	0.19	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	14.16	0.53	17.16	0.62	0.69	26.28	4.01	0.69	4.68	3.77	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.81	0.92	0.35	0.86	0.46	0.47	0.97	0.78	0.21	0.79	0.76	0.15
d, Delay for Lane Group [s/veh]	59.13	57.95	37.51	70.10	36.31	36.48	80.93	33.15	21.79	60.33	34.31	22.93
Lane Group LOS	E	E	D	E	D	D	F	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	14.29	3.39	5.59	5.99	5.75	5.68	15.60	2.55	2.69	14.33	1.81
50th-Percentile Queue Length [ft]	83.01	357.26	84.85	139.82	149.71	143.77	142.07	389.94	63.77	67.26	358.22	45.19
95th-Percentile Queue Length [veh]	5.98	20.49	6.11	9.47	10.00	9.68	9.59	22.07	4.59	4.84	20.54	3.25
95th-Percentile Queue Length [ft]	149.41	512.25	152.74	236.79	250.04	242.10	239.80	551.86	114.78	121.06	513.42	81.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	57.95	37.51	70.10	36.38	36.48	80.93	33.15	21.79	60.33	34.31	22.93
Movement LOS	E	E	D	E	D	D	F	C	C	E	C	C
d_A, Approach Delay [s/veh]	53.98			44.81			36.87			35.18		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	40.37											
Intersection LOS	D											
Intersection V/C	0.713											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	40	670	10	121	615	70	80	390	31	80	340	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	670	10	121	615	70	80	390	31	80	340	10
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	180	3	33	166	19	22	105	8	24	103	3
Total Analysis Volume [veh/h]	43	720	11	131	664	76	86	419	33	97	411	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.06	0.19	0.19	0.18	0.20	0.20	0.09	0.22	0.02	0.10	0.22
s, saturation flow rate [veh/h]	729	1900	1887	733	1900	1823	975	1900	1570	980	1889
c, Capacity [veh/h]	387	1042	1035	391	1042	1000	212	640	528	216	636
d1, Uniform Delay [s]	14.96	10.11	10.11	16.90	10.18	10.19	33.61	22.58	17.98	33.73	22.68
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	0.93	0.94	2.30	0.97	1.02	0.47	0.43	0.02	0.55	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.35	0.35	0.33	0.36	0.36	0.41	0.66	0.06	0.45	0.67
d, Delay for Lane Group [s/veh]	15.55	11.04	11.06	19.19	11.15	11.22	34.08	23.01	18.00	34.27	23.13
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.53	3.51	3.50	1.87	3.63	3.52	1.57	6.34	0.40	1.78	6.43
50th-Percentile Queue Length [ft]	13.31	87.74	87.38	46.87	90.85	88.07	39.26	158.42	9.88	44.62	160.70
95th-Percentile Queue Length [veh]	0.96	6.32	6.29	3.37	6.54	6.34	2.83	10.47	0.71	3.21	10.59
95th-Percentile Queue Length [ft]	23.96	157.93	157.29	84.36	163.52	158.52	70.67	261.64	17.79	80.32	264.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.55	11.05	11.06	19.19	11.18	11.22	34.08	23.01	18.00	34.27	23.13	23.13
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	11.30			12.39			24.47			25.21		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.95											
Intersection LOS	B											
Intersection V/C	0.423											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	560	30	60	600	50	20	253	40	110	505	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	560	30	60	600	50	20	253	40	110	505	150
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	155	8	16	161	13	6	74	12	30	136	40
Total Analysis Volume [veh/h]	100	621	33	64	643	54	23	295	47	119	545	162
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	30	30	30	30	30
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.13	0.17	0.17	0.08	0.19	0.19	0.03	0.19	0.11	0.29	0.10
s, saturation flow rate [veh/h]	759	1900	1860	791	1900	1840	875	1843	1051	1900	1578
c, Capacity [veh/h]	409	1065	1042	429	1065	1031	127	622	256	641	532
d1, Uniform Delay [s]	16.65	10.52	10.53	15.27	10.68	10.69	41.42	24.26	35.14	27.71	22.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.13	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.42	0.76	0.78	0.73	0.84	0.87	0.25	0.28	0.49	3.99	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

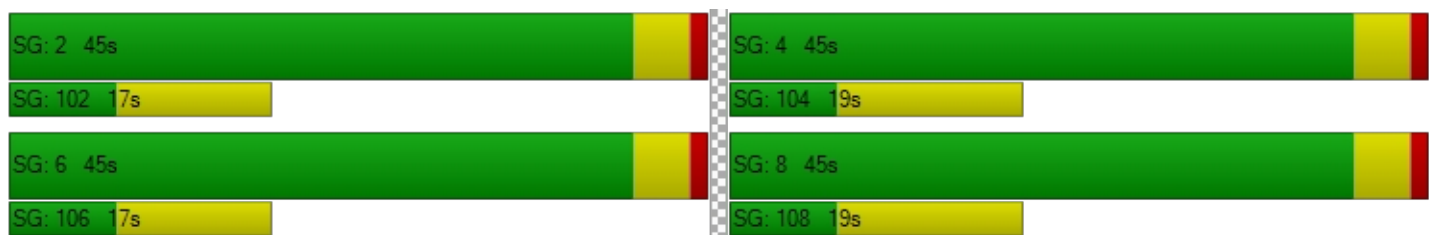
X, volume / capacity	0.24	0.31	0.31	0.15	0.33	0.33	0.18	0.55	0.46	0.85	0.30
d, Delay for Lane Group [s/veh]	18.07	11.28	11.31	16.00	11.51	11.57	41.67	24.55	35.62	31.70	22.14
Lane Group LOS	B	B	B	B	B	B	D	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.43	3.36	3.31	0.84	3.65	3.57	0.50	5.71	2.41	11.01	2.45
50th-Percentile Queue Length [ft]	35.79	83.93	82.73	21.03	91.31	89.29	12.38	142.75	60.31	275.31	61.28
95th-Percentile Queue Length [veh]	2.58	6.04	5.96	1.51	6.57	6.43	0.89	9.63	4.34	16.45	4.41
95th-Percentile Queue Length [ft]	64.43	151.07	148.91	37.85	164.35	160.72	22.28	240.73	108.55	411.36	110.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.07	11.29	11.31	16.00	11.54	11.57	41.67	24.55	24.55	35.62	31.70	22.14
Movement LOS	B	B	B	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.19			11.91			25.63			30.39		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.48											
Intersection LOS	B											
Intersection V/C	0.474											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	430	40	80	360	60	70	197	50	30	114	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	430	40	80	360	60	70	197	50	30	114	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	120	11	21	94	16	18	51	13	8	31	13
Total Analysis Volume [veh/h]	56	481	45	83	375	63	73	206	52	32	122	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	24	27	27	27
g / C, Green / Cycle	0.40	0.40	0.40	0.40	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.06	0.29	0.09	0.24	0.20	0.09	0.04
s, saturation flow rate [veh/h]	943	1842	888	1796	1686	1742	1508
c, Capacity [veh/h]	283	739	232	720	825	849	672
d1, Uniform Delay [s]	21.84	15.08	25.29	14.25	11.28	10.04	9.57
k, delay calibration	0.04	0.06	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.77	0.35	0.31	1.46	0.47	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

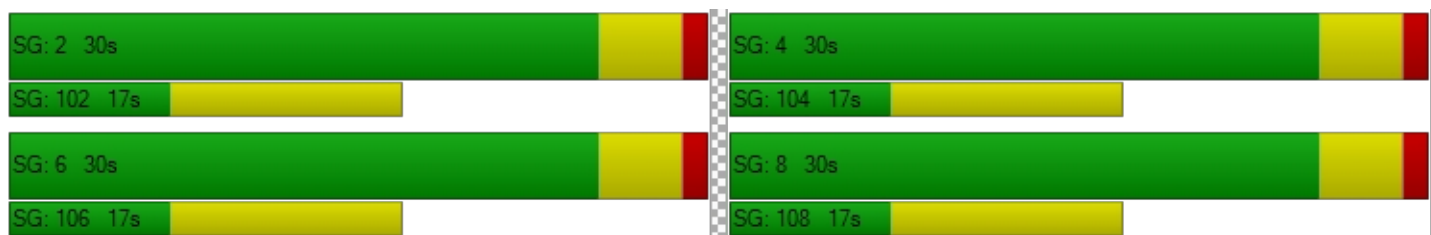
X, volume / capacity	0.20	0.71	0.36	0.61	0.40	0.18	0.08
d, Delay for Lane Group [s/veh]	21.96	15.85	25.63	14.56	12.74	10.51	9.80
Lane Group LOS	C	B	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.66	5.39	1.09	4.18	2.91	1.18	0.40
50th-Percentile Queue Length [ft]	16.48	134.69	27.31	104.42	72.70	29.42	10.00
95th-Percentile Queue Length [veh]	1.19	9.19	1.97	7.52	5.23	2.12	0.72
95th-Percentile Queue Length [ft]	29.67	229.86	49.15	187.95	130.87	52.95	18.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.96	15.85	15.85	25.63	14.56	14.56	12.74	12.74	12.74	10.51	10.51	9.80
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	A
d_A, Approach Delay [s/veh]	16.44			16.33			12.74			10.32		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.88											
Intersection LOS	B											
Intersection V/C	0.482											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	80	942	22	60	933	80	94	377	90	90	284	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	942	22	60	933	80	94	377	90	90	284	50
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	268	6	16	250	21	25	101	24	27	86	15
Total Analysis Volume [veh/h]	91	1072	25	64	999	86	101	405	97	109	344	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.17	0.29	0.29	0.12	0.29	0.30	0.10	0.21	0.06	0.11	0.18	0.04
s, saturation flow rate [veh/h]	525	1900	1879	521	1900	1802	1016	1900	1547	985	1900	1466
c, Capacity [veh/h]	259	1025	1013	261	1025	972	266	657	535	229	657	507
d1, Uniform Delay [s]	22.23	11.95	11.97	20.61	11.94	12.07	30.31	21.75	18.26	33.17	20.90	17.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.72	2.02	2.06	2.23	2.02	2.25	0.33	0.35	0.06	0.57	0.24	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

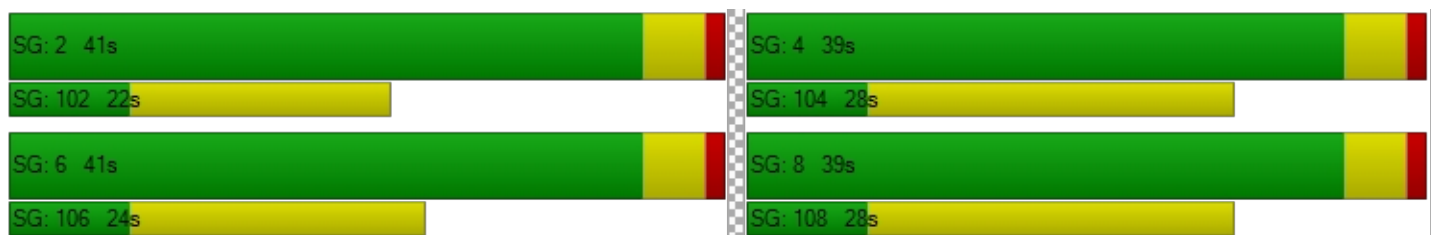
X, volume / capacity	0.35	0.54	0.54	0.25	0.54	0.55	0.38	0.62	0.18	0.48	0.52	0.12
d, Delay for Lane Group [s/veh]	25.95	13.97	14.03	22.84	13.96	14.32	30.64	22.11	18.32	33.74	21.14	17.90
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.58	6.11	6.08	1.03	6.10	6.04	1.76	6.05	1.21	2.05	5.03	0.76
50th-Percentile Queue Length [ft]	39.62	152.79	152.06	25.65	152.48	151.07	43.95	151.33	30.33	51.18	125.66	19.01
95th-Percentile Queue Length [veh]	2.85	10.17	10.13	1.85	10.15	10.07	3.16	10.09	2.18	3.68	8.70	1.37
95th-Percentile Queue Length [ft]	71.32	254.15	253.18	46.16	253.74	251.85	79.10	252.21	54.59	92.12	217.58	34.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.95	14.00	14.03	22.84	14.12	14.32	30.64	22.11	18.32	33.74	21.14	17.90
Movement LOS	C	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	14.91			14.62			22.93			23.43		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.48											
Intersection LOS	B											
Intersection V/C	0.510											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	10	166	60	60	151	70	50	462	60	20	317	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	166	60	60	151	70	50	462	60	20	317	20
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	46	17	19	48	22	13	122	16	5	84	5
Total Analysis Volume [veh/h]	11	183	66	76	192	89	53	489	64	21	338	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.22	0.33	0.06	0.05	0.26	0.04	0.02	0.18	0.01
s, saturation flow rate [veh/h]	1187	823	1579	1051	1900	1537	919	1900	1540
c, Capacity [veh/h]	451	338	538	539	1035	837	430	1035	838
d1, Uniform Delay [s]	20.95	22.42	18.44	13.80	11.17	8.66	16.27	10.09	8.41
k, delay calibration	0.17	0.40	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.87	14.11	0.14	0.36	1.55	0.18	0.22	0.84	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

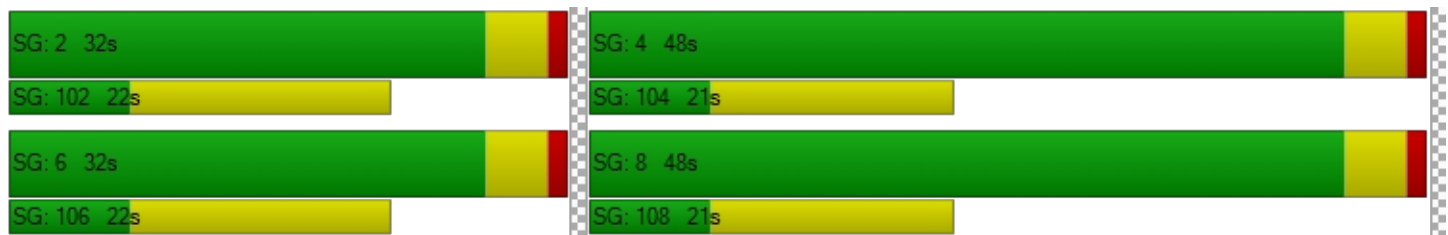
X, volume / capacity	0.58	0.79	0.17	0.10	0.47	0.08	0.05	0.33	0.03
d, Delay for Lane Group [s/veh]	22.82	36.52	18.58	14.17	12.72	8.84	16.49	10.94	8.47
Lane Group LOS	C	D	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	3.74	5.49	1.11	0.60	5.23	0.53	0.27	3.23	0.17
50th-Percentile Queue Length [ft]	93.42	137.23	27.70	15.12	130.64	13.16	6.63	80.67	4.19
95th-Percentile Queue Length [veh]	6.73	9.33	1.99	1.09	8.97	0.95	0.48	5.81	0.30
95th-Percentile Queue Length [ft]	168.15	233.29	49.87	27.21	224.37	23.68	11.94	145.21	7.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.82	22.82	22.82	36.52	36.52	18.58	14.17	12.72	8.84	16.49	10.94	8.47
Movement LOS	C	C	C	D	D	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	22.82			32.05			12.44			11.11		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.17											
Intersection LOS	B											
Intersection V/C	0.583											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	682	90	60	645	102	30	420	80	67	360	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	682	90	60	645	102	30	420	80	67	360	20
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	184	24	16	169	27	8	111	21	18	94	5
Total Analysis Volume [veh/h]	54	734	97	63	676	107	32	444	85	70	377	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.08	0.22	0.23	0.09	0.21	0.21	0.03	0.23	0.05	0.07	0.20	0.01
s, saturation flow rate [veh/h]	699	1900	1808	669	1900	1792	1011	1900	1552	954	1900	1547
c, Capacity [veh/h]	376	1048	997	358	1048	988	230	634	518	185	634	516
d1, Uniform Delay [s]	15.11	10.36	10.38	15.84	10.20	10.23	30.64	23.18	18.79	34.95	22.16	18.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.80	1.16	1.24	1.07	1.06	1.14	0.10	1.42	0.05	0.47	0.33	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.40	0.41	0.18	0.38	0.39	0.14	0.70	0.16	0.38	0.59	0.04
d, Delay for Lane Group [s/veh]	15.91	11.52	11.62	16.91	11.26	11.37	30.74	24.60	18.85	35.42	22.49	18.02
Lane Group LOS	B	B	B	B	B	B	C	C	B	D	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.68	4.20	4.06	0.83	3.90	3.75	0.54	7.16	1.08	1.32	5.67	0.26
50th-Percentile Queue Length [ft]	17.05	104.93	101.42	20.77	97.49	93.74	13.60	179.12	27.03	32.94	141.82	6.40
95th-Percentile Queue Length [veh]	1.23	7.56	7.30	1.50	7.02	6.75	0.98	11.55	1.95	2.37	9.58	0.46
95th-Percentile Queue Length [ft]	30.69	188.88	182.55	37.38	175.49	168.72	24.48	288.87	48.65	59.30	239.47	11.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.91	11.56	11.62	16.91	11.30	11.37	30.74	24.60	18.85	35.42	22.49	18.02
Movement LOS	B	B	B	B	B	B	C	C	B	D	C	B
d_A, Approach Delay [s/veh]	11.83			11.73			24.08			24.23		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.39											
Intersection LOS	B											
Intersection V/C	0.459											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	40	392	50	87	364	80	10	400	54	60	370	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	392	50	87	364	80	10	400	54	60	370	50
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	102	13	24	100	22	3	110	15	17	103	14
Total Analysis Volume [veh/h]	41	406	52	95	398	87	11	439	59	67	411	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	21	21	21	21	21	21
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.04	0.21	0.03	0.10	0.21	0.06	0.01	0.23	0.04	0.07	0.22	0.04
s, saturation flow rate [veh/h]	998	1900	1566	993	1900	1544	981	1900	1515	953	1900	1551
c, Capacity [veh/h]	481	1079	889	476	1079	877	226	571	455	207	571	466
d1, Uniform Delay [s]	14.06	8.30	6.75	15.07	8.25	6.91	27.06	22.24	17.80	29.82	21.82	17.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.35	1.00	0.13	0.94	0.97	0.23	0.03	0.84	0.05	0.33	0.65	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

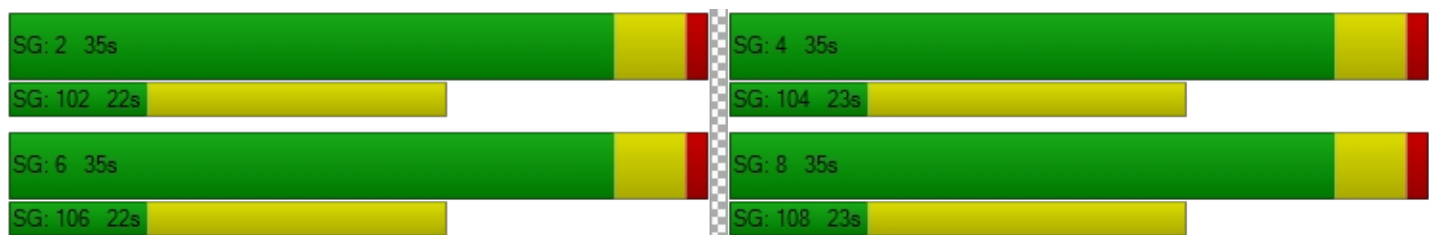
X, volume / capacity	0.09	0.38	0.06	0.20	0.37	0.10	0.05	0.77	0.13	0.32	0.72	0.12
d, Delay for Lane Group [s/veh]	14.41	9.30	6.87	16.01	9.22	7.14	27.09	23.08	17.84	30.15	22.47	17.79
Lane Group LOS	B	A	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.43	3.03	0.32	1.07	2.96	0.54	0.16	6.24	0.66	1.06	5.71	0.63
50th-Percentile Queue Length [ft]	10.74	75.81	7.89	26.81	73.88	13.57	3.97	156.03	16.57	26.44	142.85	15.68
95th-Percentile Queue Length [veh]	0.77	5.46	0.57	1.93	5.32	0.98	0.29	10.34	1.19	1.90	9.63	1.13
95th-Percentile Queue Length [ft]	19.34	136.47	14.20	48.26	132.98	24.43	7.15	258.46	29.83	47.59	240.86	28.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.41	9.30	6.87	16.01	9.22	7.14	27.09	23.08	17.84	30.15	22.47	17.79
Movement LOS	B	A	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	9.47			10.02			22.56			22.94		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	16.15											
Intersection LOS	B											
Intersection V/C	0.445											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	60	430	60	210	670	70	20	324	140	110	427	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	430	60	210	670	70	20	324	140	110	427	40
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	114	16	55	177	18	6	97	42	30	116	11
Total Analysis Volume [veh/h]	64	457	64	221	707	74	24	389	168	120	464	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.09	0.14	0.14	0.25	0.21	0.21	0.03	0.20	0.11	0.12	0.24	0.03
s, saturation flow rate [veh/h]	702	1900	1807	892	1900	1825	938	1900	1514	994	1900	1553
c, Capacity [veh/h]	335	928	882	444	928	891	230	712	567	279	712	582
d1, Uniform Delay [s]	17.22	10.65	10.68	17.76	11.58	11.61	26.85	17.22	15.40	26.95	18.11	14.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.26	0.77	0.83	3.95	1.44	1.52	0.07	0.24	0.11	0.39	0.38	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

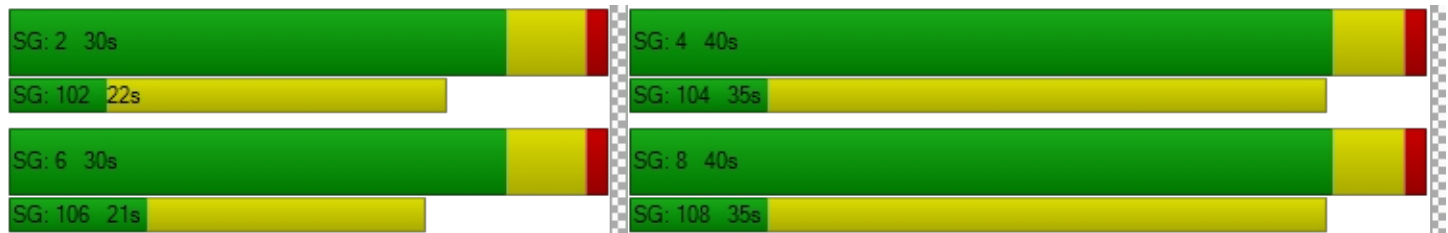
X, volume / capacity	0.19	0.29	0.29	0.50	0.43	0.43	0.10	0.55	0.30	0.43	0.65	0.07
d, Delay for Lane Group [s/veh]	18.48	11.43	11.51	21.71	13.03	13.13	26.92	17.46	15.51	27.34	18.49	14.10
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.92	2.79	2.71	2.97	3.58	3.48	0.35	4.59	1.77	1.82	5.77	0.41
50th-Percentile Queue Length [ft]	23.12	69.79	67.71	74.22	89.40	87.02	8.69	114.66	44.25	45.50	144.27	10.34
95th-Percentile Queue Length [veh]	1.66	5.03	4.87	5.34	6.44	6.27	0.63	8.10	3.19	3.28	9.71	0.74
95th-Percentile Queue Length [ft]	41.61	125.63	121.87	133.60	160.92	156.64	15.65	202.47	79.66	81.91	242.76	18.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.48	11.46	11.51	21.71	13.07	13.13	26.92	17.46	15.51	27.34	18.49	14.10
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.23			14.98			17.29			19.89		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.99											
Intersection LOS	B											
Intersection V/C	0.492											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.460

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	380	50	60	500	52	80	64	80	47	81	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	380	50	60	500	52	80	64	80	47	81	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	99	13	16	134	14	26	20	26	14	24	6
Total Analysis Volume [veh/h]	42	398	52	64	535	56	102	82	102	55	94	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	14	14	14	8	8
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.24	0.07	0.28	0.04	0.18	0.10
s, saturation flow rate [veh/h]	861	1839	931	1900	1485	1598	1667
c, Capacity [veh/h]	362	800	409	827	646	590	605
d1, Uniform Delay [s]	11.83	6.64	10.98	6.98	5.21	9.97	9.20
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.23	0.07	0.32	0.02	0.23	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

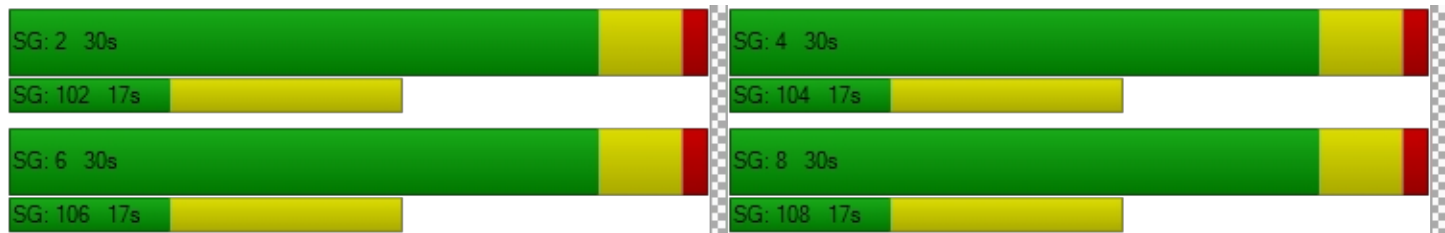
X, volume / capacity	0.12	0.56	0.16	0.65	0.09	0.48	0.28
d, Delay for Lane Group [s/veh]	11.88	6.87	11.04	7.30	5.23	10.19	9.29
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.26	0.29	1.58	0.12	1.14	0.63
50th-Percentile Queue Length [ft]	5.08	31.43	7.29	39.51	3.04	28.59	15.75
95th-Percentile Queue Length [veh]	0.37	2.26	0.52	2.84	0.22	2.06	1.13
95th-Percentile Queue Length [ft]	9.14	56.57	13.12	71.11	5.47	51.47	28.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.88	6.87	6.87	11.04	7.30	5.23	10.19	10.19	10.19	9.29	9.29	9.29
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.30			7.49			10.19			9.29		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.11											
Intersection LOS	A											
Intersection V/C	0.460											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	70	1102	60	90	1103	30	90	264	70	50	161	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1102	60	90	1103	30	90	264	70	50	161	30
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	297	16	24	298	8	23	69	18	13	42	8
Total Analysis Volume [veh/h]	75	1188	65	97	1193	32	93	274	73	52	168	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.16	0.33	0.33	0.22	0.32	0.33	0.08	0.19	0.05	0.11
s, saturation flow rate [veh/h]	462	1900	1857	450	1900	1874	1190	1816	1043	1839
c, Capacity [veh/h]	268	1132	1106	260	1132	1117	294	525	183	532
d1, Uniform Delay [s]	18.05	9.78	9.82	19.79	9.66	9.68	29.76	24.98	34.93	22.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.59	1.99	2.06	4.08	1.87	1.92	0.23	0.53	0.31	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

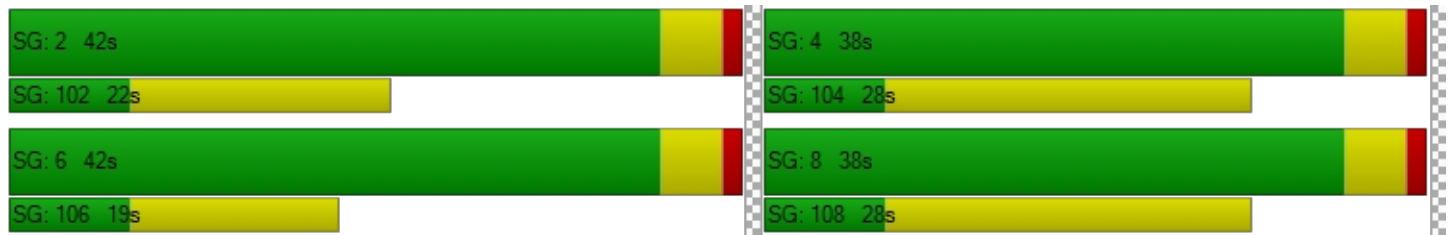
X, volume / capacity	0.28	0.56	0.56	0.37	0.54	0.55	0.32	0.66	0.28	0.37
d, Delay for Lane Group [s/veh]	20.65	11.77	11.88	23.86	11.53	11.61	29.99	25.52	35.24	22.82
Lane Group LOS	C	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.14	6.15	6.10	1.67	6.32	6.29	1.56	5.53	0.95	2.86
50th-Percentile Queue Length [ft]	28.39	153.85	152.40	41.85	157.91	157.33	39.09	138.22	23.87	71.49
95th-Percentile Queue Length [veh]	2.04	10.22	10.15	3.01	10.44	10.41	2.81	9.38	1.72	5.15
95th-Percentile Queue Length [ft]	51.10	255.56	253.63	75.34	260.95	260.19	70.37	234.62	42.96	128.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.65	11.82	11.88	23.86	11.57	11.61	29.99	25.52	25.52	35.24	22.82	22.82
Movement LOS	C	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.32			12.47			26.46			25.40		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.23											
Intersection LOS	B											
Intersection V/C	0.526											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	10	256	120	40	181	70	80	294	40	20	211	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	256	120	40	181	70	80	294	40	20	211	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	81	38	12	56	22	22	79	11	6	61	3
Total Analysis Volume [veh/h]	13	322	151	49	223	86	86	316	43	23	243	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	24	47	47	47	47
g / C, Green / Cycle	0.30	0.30	0.30	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.28	0.22	0.06	0.39	0.03	0.19	0.01
s, saturation flow rate [veh/h]	1760	1231	1552	1019	1537	1419	1557
c, Capacity [veh/h]	573	422	465	651	900	879	912
d1, Uniform Delay [s]	27.02	23.05	20.75	13.61	7.06	8.84	6.92
k, delay calibration	0.29	0.18	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.05	2.70	0.19	4.34	0.10	0.89	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

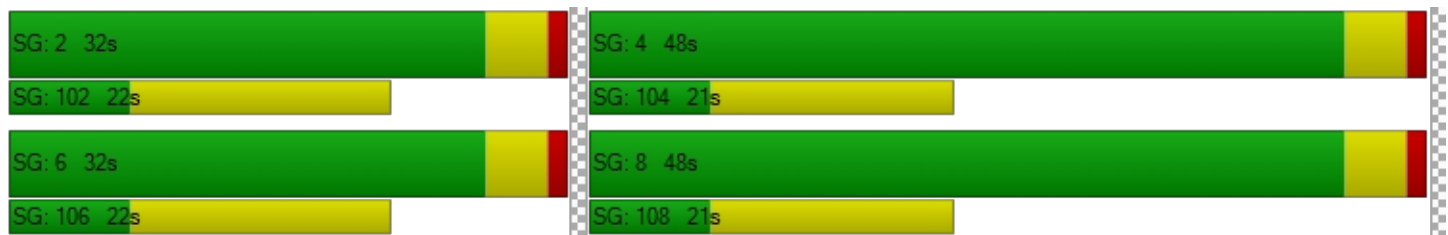
X, volume / capacity	0.85	0.64	0.19	0.62	0.05	0.30	0.01
d, Delay for Lane Group [s/veh]	36.06	25.75	20.94	17.96	7.16	9.72	6.95
Lane Group LOS	D	C	C	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.80	4.27	1.16	3.89	0.29	2.10	0.08
50th-Percentile Queue Length [ft]	244.95	106.73	28.95	97.25	7.36	52.48	2.01
95th-Percentile Queue Length [veh]	14.93	7.66	2.08	7.00	0.53	3.78	0.14
95th-Percentile Queue Length [ft]	373.29	191.45	52.12	175.05	13.25	94.46	3.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.06	36.06	36.06	25.75	25.75	20.94	17.96	17.96	7.16	9.72	9.72	6.95
Movement LOS	D	D	D	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	36.06			24.59			16.91			9.60		
Approach LOS	D			C			B			A		
d_I, Intersection Delay [s/veh]	23.31											
Intersection LOS	C											
Intersection V/C	0.671											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	50	918	100	40	857	64	20	300	62	101	260	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	918	100	40	857	64	20	300	62	101	260	60
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	238	26	11	227	17	6	83	17	27	70	16
Total Analysis Volume [veh/h]	52	953	104	42	909	68	22	331	68	109	282	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.09	0.28	0.29	0.08	0.26	0.26	0.02	0.22	0.11	0.19
s, saturation flow rate [veh/h]	584	1900	1818	542	1900	1846	1040	1834	998	1823
c, Capacity [veh/h]	299	1023	979	272	1023	994	257	636	223	632
d1, Uniform Delay [s]	18.13	11.88	11.93	19.07	11.52	11.54	28.75	21.81	33.75	21.08
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.07	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	1.93	2.06	1.20	1.64	1.70	0.05	0.67	0.62	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.53	0.53	0.15	0.48	0.49	0.09	0.63	0.49	0.55
d, Delay for Lane Group [s/veh]	19.39	13.81	13.99	20.28	13.15	13.24	28.80	22.49	34.38	21.36
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.76	6.08	5.92	0.63	5.39	5.29	0.35	5.93	2.01	4.94
50th-Percentile Queue Length [ft]	18.89	151.93	148.10	15.77	134.87	132.18	8.82	148.32	50.37	123.39
95th-Percentile Queue Length [veh]	1.36	10.12	9.92	1.14	9.20	9.06	0.63	9.93	3.63	8.58
95th-Percentile Queue Length [ft]	34.00	253.00	247.89	28.38	230.10	226.46	15.87	248.18	90.66	214.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.39	13.89	13.99	20.28	13.19	13.24	28.80	22.49	22.49	34.38	21.36	21.36
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.16			13.49			22.82			24.47		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.71											
Intersection LOS	B											
Intersection V/C	0.503											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	32	514	50	50	472	40	40	320	20	110	260	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	514	50	50	472	40	40	320	20	110	260	50
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	13	14	128	11	12	93	6	30	72	14
Total Analysis Volume [veh/h]	32	521	51	54	510	43	46	370	23	121	287	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	36	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.04	0.27	0.03	0.06	0.27	0.03	0.04	0.21	0.12	0.19
s, saturation flow rate [veh/h]	901	1900	1552	891	1900	1569	1031	1871	998	1806
c, Capacity [veh/h]	383	968	791	375	968	799	281	672	254	649
d1, Uniform Delay [s]	17.26	11.61	8.72	17.99	11.52	8.67	25.07	18.18	28.65	17.72
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	2.15	0.16	0.81	2.05	0.13	0.10	0.30	0.51	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

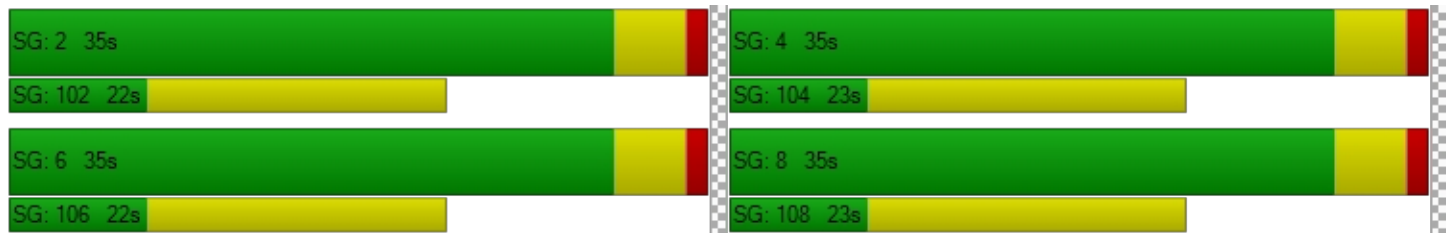
X, volume / capacity	0.08	0.54	0.06	0.14	0.53	0.05	0.16	0.58	0.48	0.53
d, Delay for Lane Group [s/veh]	17.69	13.76	8.87	18.80	13.58	8.79	25.17	18.49	29.16	17.97
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.39	5.19	0.37	0.68	5.03	0.31	0.63	4.71	1.88	3.99
50th-Percentile Queue Length [ft]	9.68	129.69	9.33	17.04	125.73	7.81	15.82	117.76	47.00	99.79
95th-Percentile Queue Length [veh]	0.70	8.92	0.67	1.23	8.71	0.56	1.14	8.27	3.38	7.19
95th-Percentile Queue Length [ft]	17.42	223.07	16.79	30.67	217.67	14.06	28.48	206.75	84.59	179.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.69	13.76	8.87	18.80	13.58	8.79	25.17	18.49	18.49	29.16	17.97	17.97
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.56			13.70			19.19			20.89		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.38											
Intersection LOS	B											
Intersection V/C	0.484											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST)\ /MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.433

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	532	121	60	494	186	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	532	121	60	494	186	110
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	148	34	16	129	55	33
Total Analysis Volume [veh/h]	591	134	63	516	221	131
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.31	0.09	0.08	0.27	0.12	0.08
s, saturation flow rate [veh/h]	1900	1545	828	1900	1810	1549
c, Capacity [veh/h]	855	695	377	855	419	359
d1, Uniform Delay [s]	6.35	4.79	11.19	6.00	9.72	9.32
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.05	0.08	0.26	0.38	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

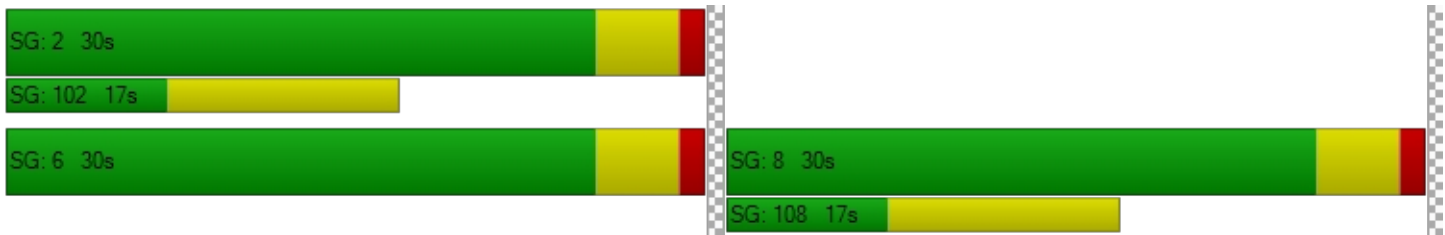
X, volume / capacity	0.69	0.19	0.17	0.60	0.53	0.36
d, Delay for Lane Group [s/veh]	6.72	4.84	11.26	6.26	10.10	9.55
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.39	0.23	0.27	1.14	0.93	0.53
50th-Percentile Queue Length [ft]	34.77	5.80	6.83	28.38	23.27	13.17
95th-Percentile Queue Length [veh]	2.50	0.42	0.49	2.04	1.68	0.95
95th-Percentile Queue Length [ft]	62.58	10.45	12.30	51.09	41.89	23.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.72	4.84	11.26	6.26	10.10	9.55
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	6.37		6.80		9.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.27					
Intersection LOS	A					
Intersection V/C	0.433					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.563

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1130	62	107	1060	60	133	361	137	80	282	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1130	62	107	1060	60	133	361	137	80	282	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	302	17	29	292	17	36	98	37	26	93	13
Total Analysis Volume [veh/h]	32	1208	66	118	1169	66	144	391	148	105	370	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	31	31	31	31	31
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.07	0.33	0.04	0.25	0.33	0.33	0.15	0.21	0.10	0.11	0.23
s, saturation flow rate [veh/h]	458	3618	1521	470	1900	1849	970	1900	1550	999	1848
c, Capacity [veh/h]	196	1789	752	197	940	914	260	742	605	288	721
d1, Uniform Delay [s]	25.43	15.33	10.67	31.71	15.18	15.27	31.96	18.70	16.42	28.72	19.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.79	2.06	0.23	12.73	3.67	3.90	1.85	0.58	0.21	0.77	0.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.16	0.68	0.09	0.60	0.66	0.67	0.55	0.53	0.24	0.36	0.59
d, Delay for Lane Group [s/veh]	27.22	17.39	10.90	44.44	18.85	19.17	33.80	19.28	16.63	29.50	20.07
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.59	8.30	0.64	2.91	8.49	8.44	2.74	5.36	1.78	1.84	6.12
50th-Percentile Queue Length [ft]	14.86	207.52	16.02	72.81	212.24	211.08	68.52	133.90	44.38	45.93	153.00
95th-Percentile Queue Length [veh]	1.07	13.03	1.15	5.24	13.27	13.21	4.93	9.15	3.20	3.31	10.18
95th-Percentile Queue Length [ft]	26.75	325.64	28.83	131.07	331.70	330.21	123.34	228.78	79.88	82.68	254.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.22	17.39	10.90	44.44	19.00	19.17	33.80	19.28	16.63	29.50	20.07	20.07
Movement LOS	C	B	B	D	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.30			21.23			21.77			21.94		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.10											
Intersection LOS	C											
Intersection V/C	0.563											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	264	42	167	182	14	71	607	157	21	449	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	264	42	167	182	14	71	607	157	21	449	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	80	13	51	56	4	19	159	41	6	122	8
Total Analysis Volume [veh/h]	24	320	51	205	224	17	74	637	165	23	488	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	50	50	50	50	50	50	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	37	37	37	37	37
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.42	0.47	0.47	0.47	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.34	0.37	0.03	0.08	0.22	0.23	0.03	0.28
s, saturation flow rate [veh/h]	1175	1843	600	600	600	890	1900	1716	686	1869
c, Capacity [veh/h]	155	773	242	252	252	293	884	799	282	870
d1, Uniform Delay [s]	36.45	16.87	20.46	21.50	13.86	25.96	14.63	14.76	21.44	15.85
k, delay calibration	0.11	0.11	0.16	0.20	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.46	11.60	17.39	0.11	2.06	1.79	2.10	0.56	3.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

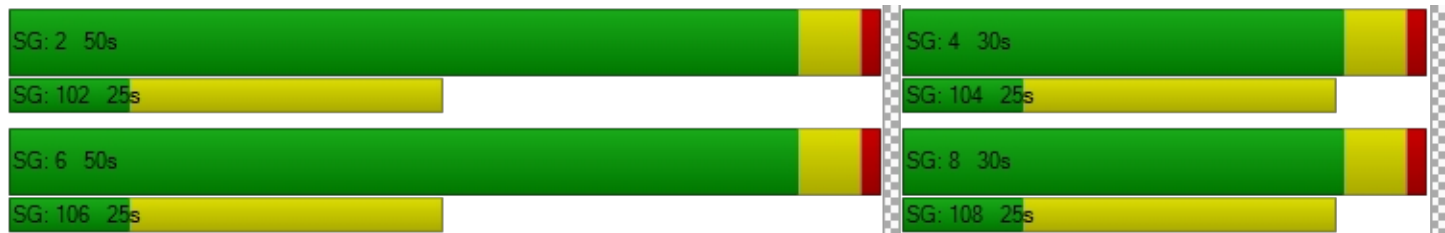
X, volume / capacity	0.15	0.48	0.85	0.89	0.07	0.25	0.47	0.48	0.08	0.60
d, Delay for Lane Group [s/veh]	36.91	17.33	32.06	38.88	13.97	28.02	16.43	16.86	22.00	18.90
Lane Group LOS	D	B	C	D	B	C	B	B	C	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	4.65	3.83	4.72	0.18	1.32	5.22	4.95	0.36	7.23
50th-Percentile Queue Length [ft]	11.45	116.21	95.69	117.91	4.48	32.94	130.48	123.77	8.90	180.72
95th-Percentile Queue Length [veh]	0.82	8.18	6.89	8.28	0.32	2.37	8.97	8.60	0.64	11.64
95th-Percentile Queue Length [ft]	20.62	204.60	172.25	206.96	8.06	59.30	224.15	215.00	16.02	290.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.91	17.33	17.33	32.06	38.88	13.97	28.02	16.58	16.86	22.00	18.90	18.90
Movement LOS	D	B	B	C	D	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.52			34.80			17.59			19.03		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	21.49											
Intersection LOS	C											
Intersection V/C	0.652											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	705	287	195	964	73	35	442	141	104	395	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	705	287	195	964	73	35	442	141	104	395	10
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	193	79	50	248	19	9	117	37	31	119	3
Total Analysis Volume [veh/h]	99	772	314	201	994	75	37	467	149	125	476	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	60	60	73	63	63	38	25	25	38	30	30
g / C, Green / Cycle	0.61	0.50	0.50	0.61	0.52	0.52	0.32	0.21	0.21	0.32	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.15	0.30	0.31	0.28	0.28	0.29	0.04	0.17	0.18	0.11	0.13	0.13
s, saturation flow rate [veh/h]	681	1900	1665	714	1900	1841	962	1900	1653	1095	1900	1872
c, Capacity [veh/h]	396	953	835	402	990	959	350	402	350	298	471	465
d1, Uniform Delay [s]	12.77	21.27	21.59	15.61	19.22	19.29	29.46	44.78	45.38	32.12	38.91	38.95
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.51	2.76	3.43	4.41	2.16	2.28	0.05	1.37	2.20	0.35	0.33	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

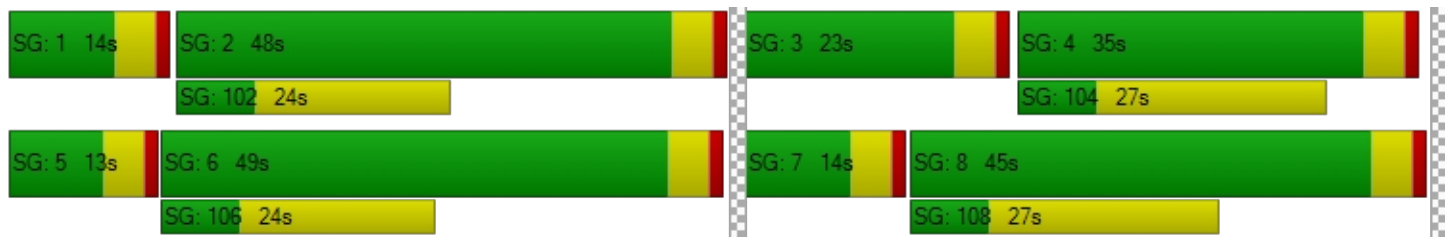
X, volume / capacity	0.25	0.60	0.62	0.50	0.55	0.55	0.11	0.79	0.85	0.42	0.52	0.52
d, Delay for Lane Group [s/veh]	14.28	24.03	25.02	20.02	21.39	21.57	29.51	46.15	47.57	32.47	39.24	39.29
Lane Group LOS	B	C	C	C	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.24	11.88	11.06	2.80	10.46	10.29	0.76	9.14	8.65	2.70	6.27	6.23
50th-Percentile Queue Length [ft]	30.92	297.01	276.62	70.09	261.58	257.28	18.89	228.46	216.28	67.47	156.81	155.83
95th-Percentile Queue Length [veh]	2.23	17.53	16.52	5.05	15.77	15.55	1.36	14.10	13.48	4.86	10.38	10.33
95th-Percentile Queue Length [ft]	55.66	438.33	413.01	126.16	394.20	388.81	34.01	352.40	336.88	121.44	259.50	258.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.28	24.29	25.02	20.02	21.47	21.57	29.51	46.60	47.57	32.47	39.26	39.29
Movement LOS	B	C	C	C	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	23.65			21.25			45.85			37.88		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.07											
Intersection LOS	C											
Intersection V/C	0.596											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	40	384	160	272	452	85	110	485	110	41	647	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	384	160	272	452	85	110	485	110	41	647	20
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	106	44	74	123	23	28	123	28	13	202	6
Total Analysis Volume [veh/h]	44	425	177	296	492	93	112	492	112	51	809	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	28	28	28	28	28	28
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.40	0.40	0.40	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.05	0.22	0.11	0.30	0.26	0.06	0.17	0.16	0.17	0.06	0.22	0.22
s, saturation flow rate [veh/h]	918	1900	1566	973	1900	1580	666	1900	1749	823	1900	1872
c, Capacity [veh/h]	334	895	738	380	895	744	238	755	695	310	755	744
d1, Uniform Delay [s]	20.55	12.61	11.04	25.64	13.21	10.40	26.78	15.20	15.26	20.86	16.30	16.32
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	1.80	0.77	14.49	2.43	0.35	0.54	0.13	0.15	0.09	0.24	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

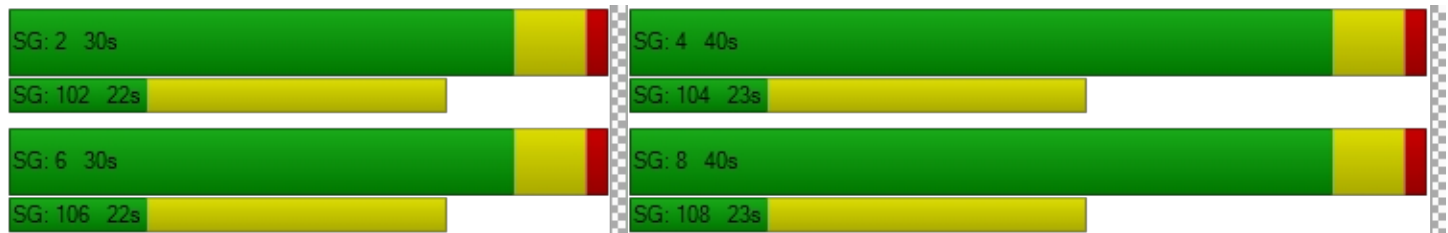
X, volume / capacity	0.13	0.47	0.24	0.78	0.55	0.12	0.47	0.41	0.42	0.16	0.56	0.56
d, Delay for Lane Group [s/veh]	21.36	14.42	11.81	40.13	15.64	10.75	27.32	15.33	15.41	20.96	16.54	16.57
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.60	4.38	1.59	6.12	5.37	0.78	1.74	3.31	3.13	0.64	4.80	4.76
50th-Percentile Queue Length [ft]	15.09	109.40	39.73	153.02	134.15	19.51	43.39	82.86	78.37	16.04	119.99	118.92
95th-Percentile Queue Length [veh]	1.09	7.81	2.86	10.18	9.17	1.40	3.12	5.97	5.64	1.15	8.39	8.33
95th-Percentile Queue Length [ft]	27.17	195.17	71.51	254.45	229.13	35.11	78.11	149.15	141.07	28.87	209.81	208.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.36	14.42	11.81	40.13	15.64	10.75	27.32	15.36	15.41	20.96	16.56	16.57
Movement LOS	C	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.17			23.35			17.24			16.81		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.21											
Intersection LOS	B											
Intersection V/C	0.526											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	30	320	60	220	430	270	10	454	30	210	767	190
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	320	60	220	430	270	10	454	30	210	767	190
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	96	18	62	122	77	3	118	8	55	203	50
Total Analysis Volume [veh/h]	36	384	72	250	488	306	10	472	31	222	810	201
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	28	28	28	28	28	28
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.40	0.40	0.40	0.40	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.05	0.11	0.05	0.25	0.22	0.23	0.02	0.13	0.02	0.24	0.27	0.28
s, saturation flow rate [veh/h]	691	3618	1572	1008	1900	1598	566	3618	1538	923	1900	1749
c, Capacity [veh/h]	305	1713	744	493	900	757	174	1429	607	353	751	691
d1, Uniform Delay [s]	18.50	10.85	10.17	17.50	12.49	12.63	27.24	14.73	13.07	24.49	17.66	17.78
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.05	0.12	0.13
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	0.30	0.26	3.70	1.77	2.26	0.05	0.05	0.01	0.86	1.26	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.22	0.10	0.51	0.47	0.49	0.06	0.33	0.05	0.63	0.70	0.71
d, Delay for Lane Group [s/veh]	19.29	11.16	10.43	21.20	14.26	14.88	27.29	14.78	13.08	25.35	18.92	19.34
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.49	1.70	0.63	3.52	4.46	4.02	0.15	2.42	0.28	3.38	6.64	6.32
50th-Percentile Queue Length [ft]	12.23	42.58	15.66	87.90	111.53	100.58	3.65	60.39	7.06	84.51	166.05	157.94
95th-Percentile Queue Length [veh]	0.88	3.07	1.13	6.33	7.93	7.24	0.26	4.35	0.51	6.08	10.87	10.44
95th-Percentile Queue Length [ft]	22.01	76.64	28.19	158.22	198.13	181.05	6.57	108.70	12.72	152.12	271.71	260.99

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.29	11.16	10.43	21.20	14.34	14.88	27.29	14.78	13.08	25.35	19.07	19.34
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.64			16.14			14.92			20.24		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.82											
Intersection LOS	B											
Intersection V/C	0.528											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.714

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	60	590	60	440	880	60	100	344	340	166	871	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	590	60	440	880	60	100	344	340	166	871	80
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	164	17	116	231	16	27	91	90	51	270	25
Total Analysis Volume [veh/h]	67	657	67	463	925	63	106	365	361	206	1079	99
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	59	42	42	59	48	48	52	36	36	52	40	40
g / C, Green / Cycle	0.49	0.35	0.35	0.49	0.40	0.40	0.43	0.30	0.30	0.43	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.09	0.19	0.20	0.26	0.26	0.27	0.15	0.19	0.24	0.20	0.31	0.32
s, saturation flow rate [veh/h]	774	1900	1826	1755	1900	1847	726	1900	1526	1021	1900	1836
c, Capacity [veh/h]	340	660	634	864	757	735	254	572	459	368	637	616
d1, Uniform Delay [s]	19.63	31.70	31.76	21.00	29.46	29.58	27.54	36.31	38.42	25.91	38.63	38.81
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.05	0.16	0.04	0.28	0.29
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	3.37	3.58	2.37	4.46	4.73	4.92	0.54	4.33	0.50	15.13	17.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.20	0.56	0.56	0.54	0.66	0.67	0.42	0.64	0.79	0.56	0.94	0.94
d, Delay for Lane Group [s/veh]	20.93	35.07	35.34	23.37	33.92	34.31	32.47	36.85	42.76	26.41	53.76	55.86
Lane Group LOS	C	D	D	C	C	C	C	D	D	C	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.20	9.83	9.57	10.23	13.43	13.30	2.16	9.31	10.21	3.79	19.42	19.33
50th-Percentile Queue Length [ft]	29.98	245.76	239.35	255.86	335.78	332.46	54.02	232.76	255.19	94.84	485.59	483.32
95th-Percentile Queue Length [veh]	2.16	14.97	14.65	15.48	19.44	19.28	3.89	14.31	15.45	6.83	26.65	26.54
95th-Percentile Queue Length [ft]	53.97	374.31	366.21	387.03	486.04	481.98	97.23	357.87	386.19	170.71	666.28	663.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.93	35.19	35.34	23.37	34.10	34.31	32.47	36.85	42.76	26.41	54.70	55.86
Movement LOS	C	D	D	C	C	C	C	D	D	C	D	E
d_A, Approach Delay [s/veh]	33.99			30.69			38.85			50.57		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	38.97											
Intersection LOS	D											
Intersection V/C	0.714											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	335	260	0	499	808	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	335	260	0	499	808	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	90	70	0	136	222	0
Total Analysis Volume [veh/h]	359	279	0	543	888	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62
g / C, Green / Cycle	0.21	0.21	0.69	0.69
(v / s)_j Volume / Saturation Flow Rate	0.18	0.19	0.15	0.25
s, saturation flow rate [veh/h]	1810	1629	3618	3618
c, Capacity [veh/h]	377	339	2494	2494
d1, Uniform Delay [s]	34.53	34.61	5.10	5.74
k, delay calibration	0.13	0.13	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.13	9.82	0.20	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

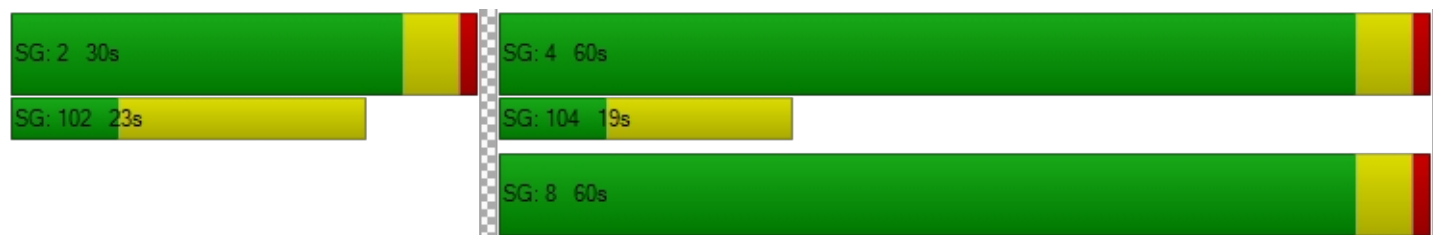
X, volume / capacity	0.89	0.90	0.22	0.36
d, Delay for Lane Group [s/veh]	42.66	44.43	5.30	6.14
Lane Group LOS	D	D	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	7.30	6.80	1.63	3.01
50th-Percentile Queue Length [ft]	182.59	170.06	40.73	75.27
95th-Percentile Queue Length [veh]	11.74	11.08	2.93	5.42
95th-Percentile Queue Length [ft]	293.40	276.99	73.31	135.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.84	44.43	0.00	5.30	6.14	0.00
Movement LOS	D	D		A	A	
d_A, Approach Delay [s/veh]	43.51		5.30		6.14	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	17.44					
Intersection LOS	B					
Intersection V/C	0.432					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	100	80	10	30	30	20	449	20	18	1188	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	100	80	10	30	30	20	449	20	18	1188	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	34	27	3	10	10	6	125	6	5	324	19
Total Analysis Volume [veh/h]	54	135	108	14	41	41	22	502	22	18	1297	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	63	63	63	63	63
g / C, Green / Cycle	0.20	0.20	0.70	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.17	0.06	0.05	0.14	0.14	0.36	0.37
s, saturation flow rate [veh/h]	1700	1609	402	1900	1871	1900	1857
c, Capacity [veh/h]	387	367	278	1326	1306	1326	1296
d1, Uniform Delay [s]	34.68	30.45	12.24	4.75	4.75	6.41	6.49
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	0.14	0.56	0.34	0.34	1.45	1.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

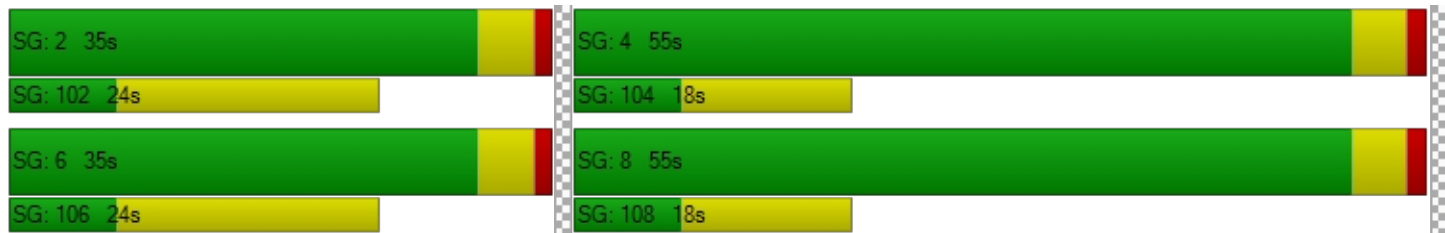
X, volume / capacity	0.77	0.26	0.08	0.20	0.20	0.52	0.53
d, Delay for Lane Group [s/veh]	35.90	30.59	12.80	5.09	5.10	7.85	8.05
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.19	1.73	0.27	1.55	1.53	5.54	5.63
50th-Percentile Queue Length [ft]	154.69	43.22	6.77	38.73	38.33	138.47	140.80
95th-Percentile Queue Length [veh]	10.27	3.11	0.49	2.79	2.76	9.40	9.52
95th-Percentile Queue Length [ft]	256.68	77.79	12.18	69.71	69.00	234.96	238.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.90	35.90	35.90	30.59	30.59	30.59	12.80	5.09	5.10	0.00	7.94	8.05
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.90			30.59			5.40			7.95		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	11.88											
Intersection LOS	B											
Intersection V/C	0.544											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	66.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	40	940	97	80	690	250	14	189	50	440	568	200
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	940	97	80	690	250	14	189	50	440	568	200
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	250	26	20	174	63	4	53	14	122	157	55
Total Analysis Volume [veh/h]	43	999	103	81	697	253	16	211	56	487	629	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	24	24	33	23	23	26	26	26	48	48	58
g / C, Green / Cycle	0.36	0.26	0.26	0.36	0.26	0.26	0.29	0.29	0.29	0.54	0.54	0.64
(v / s)_j Volume / Saturation Flow Rate	0.05	0.29	0.31	0.10	0.26	0.29	0.02	0.07	0.08	0.34	0.33	0.14
s, saturation flow rate [veh/h]	876	1900	1749	786	1900	1560	805	1900	1691	1413	1900	1555
c, Capacity [veh/h]	284	503	463	268	488	400	114	552	491	814	1019	997
d1, Uniform Delay [s]	21.94	33.11	33.11	22.74	33.46	33.46	42.10	24.40	24.56	13.50	14.47	6.76
k, delay calibration	0.50	0.50	0.50	0.06	0.50	0.50	0.04	0.04	0.04	0.12	0.10	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	75.05	98.28	0.38	45.77	85.50	0.21	0.09	0.11	0.78	0.55	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

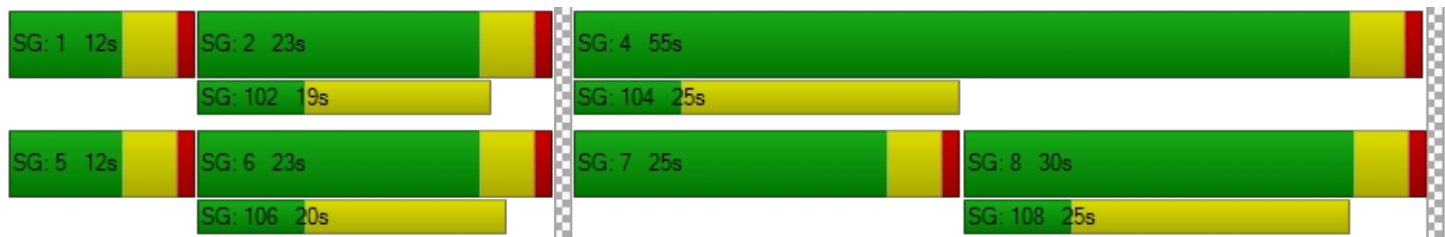
X, volume / capacity	0.15	1.11	1.17	0.30	1.02	1.13	0.14	0.25	0.27	0.60	0.62	0.22
d, Delay for Lane Group [s/veh]	23.07	108.16	131.38	23.12	79.23	118.96	42.30	24.49	24.67	14.28	15.02	6.80
Lane Group LOS	C	F	F	C	F	F	D	C	C	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.66	20.93	22.24	1.12	16.36	17.86	0.35	2.16	2.09	5.97	8.34	1.58
50th-Percentile Queue Length [ft]	16.39	523.18	556.11	27.98	409.11	446.40	8.66	53.88	52.32	149.32	208.42	39.42
95th-Percentile Queue Length [veh]	1.18	30.28	32.80	2.01	23.27	26.55	0.62	3.88	3.77	9.98	13.07	2.84
95th-Percentile Queue Length [ft]	29.50	757.06	819.98	50.36	581.72	663.87	15.60	96.99	94.17	249.52	326.80	70.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.07	118.37	131.38	23.12	90.62	118.96	42.30	24.55	24.67	14.28	15.02	6.80
Movement LOS	C	F	F	C	F	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	115.96			92.27			25.58			13.39		
Approach LOS	F			F			C			B		
d_I, Intersection Delay [s/veh]	66.66											
Intersection LOS	E											
Intersection V/C	0.673											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1262	55	47	1144	50	63	112	65	60	61	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1262	55	47	1144	50	63	112	65	60	61	50
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	327	14	12	298	13	19	34	20	19	19	16
Total Analysis Volume [veh/h]	62	1306	57	49	1191	52	77	137	79	75	76	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	20	20
g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.64	0.64	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.14	0.36	0.36	0.12	0.33	0.33	0.20	0.17
s, saturation flow rate [veh/h]	454	1900	1860	405	1900	1861	1501	1240
c, Capacity [veh/h]	289	1215	1189	256	1215	1190	426	366
d1, Uniform Delay [s]	14.63	8.14	8.18	15.80	7.76	7.78	28.05	26.69
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	1.90	1.98	1.65	1.56	1.62	0.75	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.56	0.57	0.19	0.52	0.52	0.69	0.58
d, Delay for Lane Group [s/veh]	16.32	10.04	10.17	17.45	9.32	9.40	28.80	27.24
Lane Group LOS	B	B	B	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.81	5.92	5.90	0.68	5.12	5.08	5.06	3.51
50th-Percentile Queue Length [ft]	20.26	147.93	147.50	16.88	127.91	127.02	126.51	87.83
95th-Percentile Queue Length [veh]	1.46	9.91	9.88	1.22	8.83	8.78	8.75	6.32
95th-Percentile Queue Length [ft]	36.46	247.67	247.08	30.38	220.65	219.43	218.75	158.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.32	10.10	10.17	17.45	9.36	9.40	28.80	28.80	28.80	27.24	27.24	27.24
Movement LOS	B	B	B	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.37			9.67			28.80			27.24		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	12.88											
Intersection LOS	B											
Intersection V/C	0.559											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	65	1389	71	66	1348	177	32	93	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	65	1389	71	66	1348	177	32	93	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	17	358	18	17	355	47	9	30	15
Total Analysis Volume [veh/h]	0	0	0	67	1430	73	69	1419	186	37	121	58
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	L	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		98	98	98	98	98	98	13	13
g / C, Green / Cycle		0.82	0.82	0.82	0.82	0.82	0.82	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate		0.21	0.40	0.40	0.19	0.43	0.44	0.09	0.04
s, saturation flow rate [veh/h]		321	1900	1862	354	1900	1813	1774	1477
c, Capacity [veh/h]		270	1554	1523	299	1554	1484	186	155
d1, Uniform Delay [s]		9.08	3.29	3.31	7.93	3.46	3.53	52.65	49.92
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.18	1.09	1.13	1.80	1.25	1.39	4.06	0.55
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.25	0.49	0.49	0.23	0.52	0.54	0.85	0.37
d, Delay for Lane Group [s/veh]		11.26	4.38	4.45	9.73	4.71	4.92	56.71	50.48
Lane Group LOS		B	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.90	4.46	4.45	0.85	5.35	5.39	4.84	1.63
50th-Percentile Queue Length [ft]		22.40	111.49	111.29	21.34	133.87	134.76	120.96	40.87
95th-Percentile Queue Length [veh]		1.61	7.92	7.91	1.54	9.15	9.20	8.45	2.94
95th-Percentile Queue Length [ft]		40.33	198.07	197.79	38.40	228.75	229.95	211.15	73.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	11.26	4.41	4.45	9.73	4.80	4.92	56.71	56.71	50.48
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			4.71			5.02			55.04		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	8.00											
Intersection LOS	A											
Intersection V/C	0.527											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.544

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1100	190	125	1050	20	130	10	133	20	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1100	190	125	1050	20	130	10	133	20	10	10
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	280	48	32	273	5	37	3	38	7	4	4
Total Analysis Volume [veh/h]	10	1122	194	130	1091	21	147	11	151	30	15	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	86	86	86	14	14	6
g / C, Green / Cycle	0.62	0.62	0.72	0.72	0.72	0.12	0.12	0.05
(v / s)_j Volume / Saturation Flow Rate	0.38	0.39	0.23	0.29	0.29	0.09	0.10	0.03
s, saturation flow rate [veh/h]	1874	1605	577	1900	1886	1816	1549	1777
c, Capacity [veh/h]	1198	1000	401	1367	1357	209	178	90
d1, Uniform Delay [s]	13.55	13.89	10.30	6.69	6.69	51.45	52.04	55.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.13	2.89	2.13	0.91	0.91	2.11	4.26	3.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

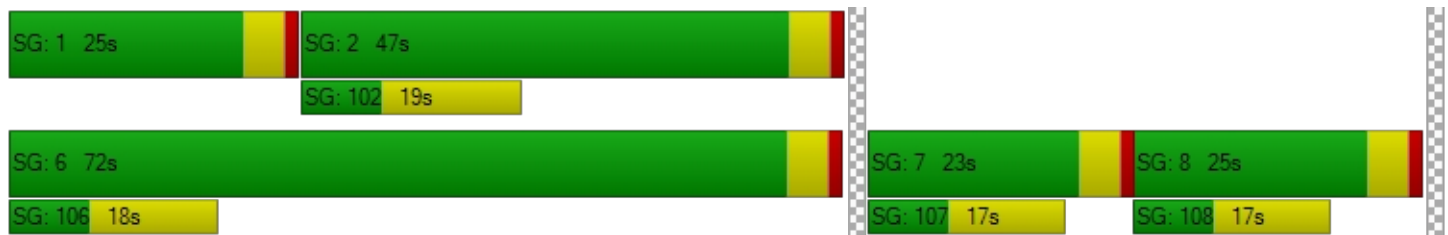
X, volume / capacity	0.59	0.62	0.32	0.41	0.41	0.76	0.85	0.67
d, Delay for Lane Group [s/veh]	15.68	16.78	12.44	7.59	7.61	53.56	56.30	59.06
Lane Group LOS	B	B	B	A	A	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	11.31	10.35	1.11	5.27	5.24	4.77	4.70	1.85
50th-Percentile Queue Length [ft]	282.70	258.76	27.80	131.74	131.07	119.16	117.51	46.25
95th-Percentile Queue Length [veh]	16.82	15.63	2.00	9.03	9.00	8.35	8.26	3.33
95th-Percentile Queue Length [ft]	420.57	390.66	50.04	225.86	224.95	208.67	206.39	83.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.68	16.10	16.78	12.44	7.60	7.61	53.56	53.56	56.30	59.06	59.06	59.06
Movement LOS	B	B	B	B	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	16.20			8.11			54.90			59.06		
Approach LOS	B			A			D			E		
d_I, Intersection Delay [s/veh]	17.72											
Intersection LOS	B											
Intersection V/C	0.544											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	530	80	203	660	10	120	305	77	40	275	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	530	80	203	660	10	120	305	77	40	275	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	147	22	55	178	3	34	86	22	12	79	3
Total Analysis Volume [veh/h]	0	589	89	218	710	11	135	344	87	46	317	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	53	53	28	28	28	28	28
g / C, Green / Cycle	0.45	0.58	0.58	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.37	0.23	0.38	0.13	0.24	0.05	0.17	0.01
s, saturation flow rate [veh/h]	1844	966	1894	1077	1827	972	1900	1551
c, Capacity [veh/h]	838	443	1107	239	572	150	594	485
d1, Uniform Delay [s]	21.19	14.93	12.52	37.39	27.79	40.64	25.49	21.40
k, delay calibration	0.50	0.50	0.50	0.04	0.17	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.33	3.86	2.98	0.79	3.22	0.42	0.28	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

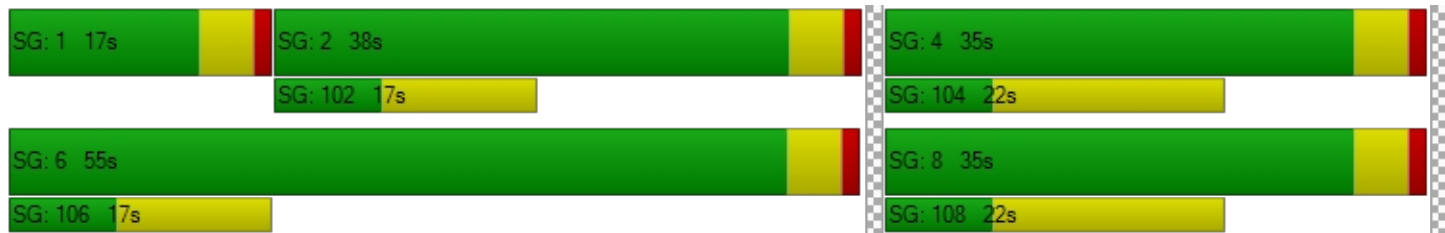
X, volume / capacity	0.81	0.49	0.65	0.57	0.75	0.31	0.53	0.02
d, Delay for Lane Group [s/veh]	29.52	18.79	15.49	38.18	31.02	41.06	25.76	21.41
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	13.23	2.22	9.11	2.90	8.57	1.01	5.57	0.18
50th-Percentile Queue Length [ft]	330.81	55.51	227.75	72.41	214.31	25.22	139.21	4.41
95th-Percentile Queue Length [veh]	19.20	4.00	14.06	5.21	13.37	1.82	9.44	0.32
95th-Percentile Queue Length [ft]	479.95	99.91	351.49	130.34	334.35	45.40	235.96	7.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	29.52	29.52	18.79	15.49	15.49	38.18	31.02	31.02	41.06	25.76	21.41
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		29.52		16.26			32.73			27.50		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]		25.06										
Intersection LOS		C										
Intersection V/C		0.667										

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	612	544	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	612	544	10	10	10
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	161	148	3	4	4
Total Analysis Volume [veh/h]	21	642	592	11	16	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	1
g / C, Green / Cycle	0.47	0.47	0.47	0.06
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.32	0.02
s, saturation flow rate [veh/h]	827	1900	1893	1707
c, Capacity [veh/h]	491	891	888	114
d1, Uniform Delay [s]	7.27	4.22	4.10	8.79
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.42	0.34	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

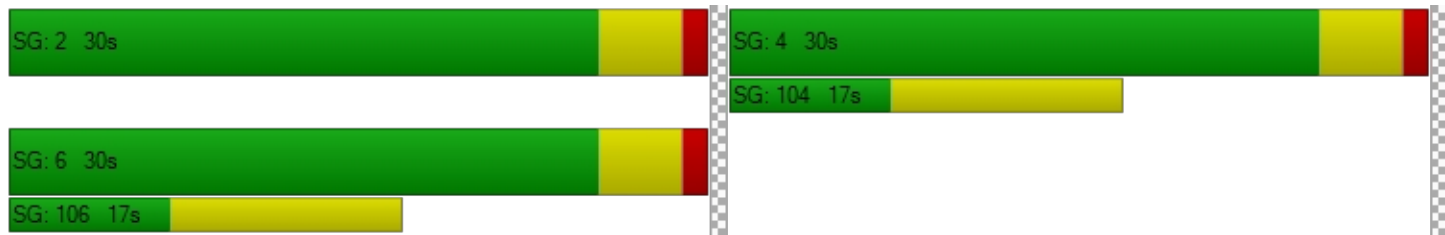
X, volume / capacity	0.04	0.72	0.68	0.28
d, Delay for Lane Group [s/veh]	7.28	4.64	4.44	9.29
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.33	0.30	0.08
50th-Percentile Queue Length [ft]	1.11	8.35	7.39	2.02
95th-Percentile Queue Length [veh]	0.08	0.60	0.53	0.15
95th-Percentile Queue Length [ft]	1.99	15.04	13.30	3.64

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.28	4.64	4.44	4.44	9.29	9.29
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.72		4.44		9.29	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.70					
Intersection LOS	A					
Intersection V/C	0.357					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	1031	480	50	1172	503	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1031	480	50	1172	503	132
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	275	128	14	323	148	39
Total Analysis Volume [veh/h]	1100	512	55	1290	591	155
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	79	79	5	88	23	23
g / C, Green / Cycle	0.66	0.66	0.04	0.73	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.42	0.47	0.03	0.36	0.17	0.10
s, saturation flow rate [veh/h]	1900	1697	1810	3618	3514	1543
c, Capacity [veh/h]	1248	1115	72	2658	662	291
d1, Uniform Delay [s]	12.25	13.44	57.02	6.55	47.46	43.89
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.59	4.08	6.30	0.64	1.75	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.65	0.72	0.77	0.49	0.89	0.53
d, Delay for Lane Group [s/veh]	14.84	17.52	63.32	7.19	49.22	44.46
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	13.18	14.74	1.78	6.21	8.74	4.21
50th-Percentile Queue Length [ft]	329.60	368.49	44.42	155.17	218.48	105.16
95th-Percentile Queue Length [veh]	19.14	21.04	3.20	10.29	13.59	7.57
95th-Percentile Queue Length [ft]	478.48	525.89	79.96	257.31	339.68	189.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.56	17.52	63.32	7.19	49.22	44.46
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	16.18		9.48		48.23	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	20.20					
Intersection LOS	C					
Intersection V/C	0.674					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	64	380	214	60	283	63	278	714	90	50	409	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	380	214	60	283	63	278	714	90	50	409	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	107	60	18	85	19	81	207	26	15	124	3
Total Analysis Volume [veh/h]	72	429	242	72	339	76	323	830	105	61	496	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.07	0.23	0.16	0.07	0.18	0.05	0.27	0.25	0.26	0.10	0.13	0.14
s, saturation flow rate [veh/h]	1051	1900	1538	964	1900	1566	1212	1900	1781	603	1900	1870
c, Capacity [veh/h]	408	839	679	342	839	692	563	812	761	117	483	475
d1, Uniform Delay [s]	18.96	14.15	13.00	21.45	13.33	11.51	14.81	15.37	15.52	34.93	22.57	22.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.08	0.09	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	2.22	1.46	1.40	1.45	0.32	0.93	0.48	0.65	1.33	0.33	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

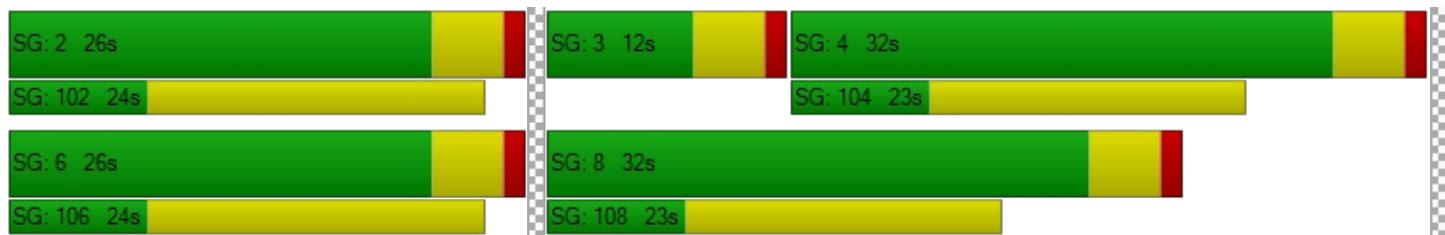
X, volume / capacity	0.18	0.51	0.36	0.21	0.40	0.11	0.57	0.59	0.60	0.52	0.53	0.53
d, Delay for Lane Group [s/veh]	19.90	16.37	14.46	22.85	14.78	11.83	15.73	15.85	16.17	36.26	22.91	22.95
Lane Group LOS	B	B	B	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.93	4.82	2.50	1.03	3.54	0.68	3.40	5.37	5.26	1.06	3.47	3.45
50th-Percentile Queue Length [ft]	23.35	120.48	62.61	25.76	88.50	17.04	85.01	134.16	131.43	26.39	86.76	86.31
95th-Percentile Queue Length [veh]	1.68	8.42	4.51	1.85	6.37	1.23	6.12	9.17	9.02	1.90	6.25	6.21
95th-Percentile Queue Length [ft]	42.03	210.48	112.71	46.37	159.31	30.68	153.02	229.13	225.44	47.51	156.16	155.36

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.90	16.37	14.46	22.85	14.78	11.83	15.73	15.98	16.17	36.26	22.93	22.95
Movement LOS	B	B	B	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	16.09			15.51			15.94			24.36		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.47											
Intersection LOS	B											
Intersection V/C	0.489											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	40.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.624

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	330	210	70	600	83	370	804	80	25	867	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	330	210	70	600	83	370	804	80	25	867	10
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	96	61	20	173	24	103	223	22	7	243	3
Total Analysis Volume [veh/h]	58	384	245	81	690	96	411	893	89	28	973	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	27	55	7	28	28	12	64	75	4	55	55
g / C, Green / Cycle	0.05	0.22	0.46	0.06	0.23	0.23	0.10	0.53	0.63	0.04	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.03	0.11	0.16	0.03	0.21	0.21	0.12	0.25	0.06	0.02	0.26	0.26
s, saturation flow rate [veh/h]	1810	3618	1563	2796	1900	1802	3514	3618	1572	1810	1900	1891
c, Capacity [veh/h]	91	812	722	172	440	417	365	1916	983	64	877	873
d1, Uniform Delay [s]	55.93	40.37	20.61	56.93	44.94	45.06	53.76	17.61	8.94	56.68	23.49	23.50
k, delay calibration	0.04	0.04	0.04	0.04	0.07	0.08	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.80	0.16	0.10	0.74	5.46	6.70	60.51	0.82	0.01	1.72	2.60	2.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.47	0.34	0.47	0.91	0.92	1.13	0.47	0.09	0.44	0.56	0.56
d, Delay for Lane Group [s/veh]	58.73	40.53	20.71	57.67	50.39	51.76	114.27	18.43	8.96	58.40	26.09	26.12
Lane Group LOS	E	D	C	E	D	D	F	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.79	4.96	4.40	1.23	12.23	11.89	8.56	7.80	0.91	0.86	10.66	10.62
50th-Percentile Queue Length [ft]	44.87	123.92	109.92	30.77	305.86	297.31	213.91	194.95	22.71	21.57	266.41	265.54
95th-Percentile Queue Length [veh]	3.23	8.61	7.84	2.22	17.97	17.55	13.97	12.38	1.63	1.55	16.01	15.97
95th-Percentile Queue Length [ft]	80.77	215.20	195.89	55.39	449.27	438.71	349.19	309.44	40.87	38.83	400.25	399.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.73	40.53	20.71	57.67	50.97	51.76	114.27	18.43	8.96	58.40	26.10	26.12
Movement LOS	E	D	C	E	D	D	F	B	A	E	C	C
d_A, Approach Delay [s/veh]	35.00			51.68			46.10			27.00		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	40.51											
Intersection LOS	D											
Intersection V/C	0.624											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	59.6
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	770	76	470	1230	70	110	1034	20	126	971	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	770	76	470	1230	70	110	1034	20	126	971	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	216	21	120	314	18	33	306	6	34	264	16
Total Analysis Volume [veh/h]	67	862	85	481	1258	72	130	1223	24	137	1055	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	36	36	15	45	45	6	44	44	7	44	44
g / C, Green / Cycle	0.05	0.30	0.30	0.13	0.38	0.38	0.05	0.37	0.37	0.06	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.24	0.06	0.14	0.35	0.05	0.04	0.23	0.23	0.04	0.41	0.42
s, saturation flow rate [veh/h]	1810	3618	1536	3514	3618	1542	3514	3618	1873	3514	1800	900
c, Capacity [veh/h]	87	1073	456	451	1365	582	188	1325	686	194	663	331
d1, Uniform Delay [s]	56.47	38.95	31.41	52.28	35.66	24.40	55.81	31.15	31.19	55.71	37.90	37.90
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	2.06	0.28	34.31	4.27	0.13	1.72	2.18	4.21	1.76	72.53	93.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

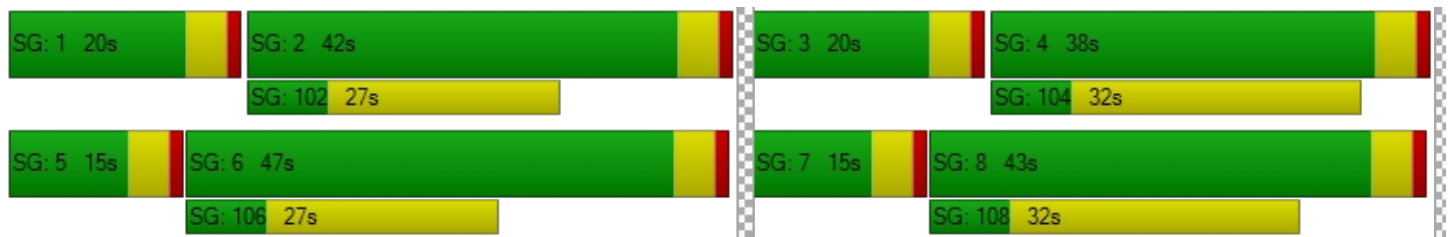
X, volume / capacity	0.77	0.80	0.19	1.07	0.92	0.12	0.69	0.62	0.62	0.71	1.12	1.14
d, Delay for Lane Group [s/veh]	61.89	41.01	31.68	86.58	39.94	24.54	57.52	33.33	35.40	57.47	110.43	131.50
Lane Group LOS	E	D	C	F	D	C	E	C	D	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	12.69	2.00	8.74	17.37	1.32	1.98	10.08	10.88	2.09	16.21	18.15
50th-Percentile Queue Length [ft]	55.78	317.26	50.11	218.60	434.33	32.97	49.49	251.94	272.03	52.16	405.23	453.72
95th-Percentile Queue Length [veh]	4.02	18.53	3.61	13.97	24.21	2.37	3.56	15.28	16.29	3.76	24.48	27.31
95th-Percentile Queue Length [ft]	100.41	463.32	90.21	349.15	605.23	59.35	89.08	382.10	407.28	93.89	612.08	682.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	41.01	31.68	86.58	39.94	24.54	57.52	34.01	35.40	57.47	116.68	131.50
Movement LOS	E	D	C	F	D	C	E	C	D	E	F	F
d_A, Approach Delay [s/veh]	41.60			51.71			36.25			111.00		
Approach LOS	D			D			D			F		
d_I, Intersection Delay [s/veh]	59.59											
Intersection LOS	E											
Intersection V/C	0.842											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	43.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	10	260	70	10	60	40	1404	10	20	1547	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	10	260	70	10	60	40	1404	10	20	1547	10
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	4	94	23	3	20	10	359	3	5	407	3
Total Analysis Volume [veh/h]	86	14	374	92	13	79	41	1435	10	21	1627	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	5	72	72	4	71	71
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.25	0.04	0.60	0.60	0.03	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.07	0.01	0.24	0.07	0.06	0.02	0.26	0.26	0.01	0.60	0.63
s, saturation flow rate [veh/h]	1320	1900	1577	1409	1621	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	309	478	397	381	408	79	2184	1143	54	1061	531
d1, Uniform Delay [s]	42.20	33.82	44.00	38.22	35.59	56.09	12.76	12.76	57.10	24.60	24.60
k, delay calibration	0.04	0.04	0.27	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.01	21.67	0.32	0.28	1.95	0.63	1.20	1.72	30.92	56.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.03	0.94	0.24	0.23	0.52	0.43	0.43	0.39	1.01	1.06
d, Delay for Lane Group [s/veh]	42.38	33.83	65.68	38.55	35.87	58.04	13.40	13.97	58.83	55.53	80.73
Lane Group LOS	D	C	E	D	D	E	B	B	E	F	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.21	0.31	13.08	2.26	2.16	1.26	6.83	7.33	0.65	18.51	22.23
50th-Percentile Queue Length [ft]	55.37	7.72	327.06	56.47	53.97	31.47	170.73	183.26	16.28	462.85	555.74
95th-Percentile Queue Length [veh]	3.99	0.56	19.01	4.07	3.89	2.27	11.11	11.77	1.17	25.84	31.40
95th-Percentile Queue Length [ft]	99.67	13.90	475.36	101.65	97.15	56.64	277.87	294.27	29.31	646.08	785.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.38	33.83	65.68	38.55	35.87	35.87	58.04	13.59	13.97	58.83	64.07	80.73
Movement LOS	D	C	E	D	D	D	E	B	B	E	F	F
d_A, Approach Delay [s/veh]	60.51			37.21			14.82			64.12		
Approach LOS	E			D			B			E		
d_I, Intersection Delay [s/veh]	43.10											
Intersection LOS	D											
Intersection V/C	0.885											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	39.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.928

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	550	1187	347	0	0	1857
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	550	1187	347	0	0	1857
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	142	306	92	0	0	498
Total Analysis Volume [veh/h]	567	1224	369	0	0	1994
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	24	94	17	86
g / C, Green / Cycle	0.20	0.79	0.14	0.72
(v / s)_j Volume / Saturation Flow Rate	0.16	0.43	0.10	0.77
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	713	2217	498	1873
d1, Uniform Delay [s]	45.46	4.86	49.69	16.76
k, delay calibration	0.04	0.31	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.78	0.61	0.83	40.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

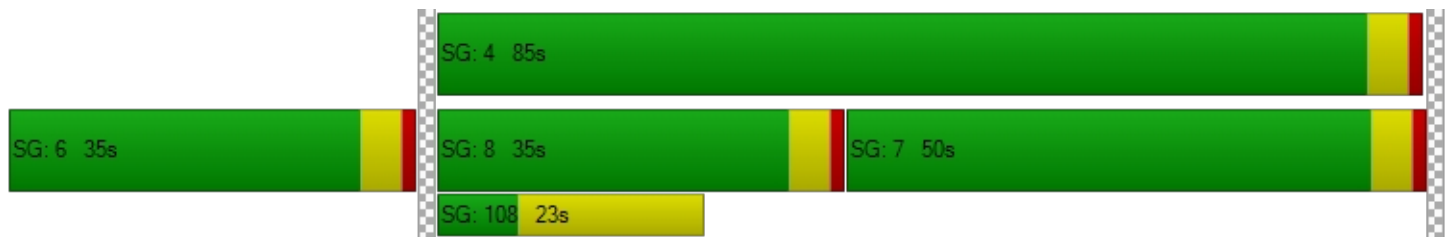
X, volume / capacity	0.80	0.55	0.74	1.06
d, Delay for Lane Group [s/veh]	46.24	5.47	50.51	57.14
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	7.70	3.56	5.37	16.01
50th-Percentile Queue Length [ft]	192.60	88.96	134.26	400.25
95th-Percentile Queue Length [veh]	12.26	6.41	9.17	23.75
95th-Percentile Queue Length [ft]	306.39	160.13	229.28	593.64

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	46.24	5.47	50.51	0.00	0.00	57.14
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	18.38		50.51		57.14	
Approach LOS	B		D		E	
d_I, Intersection Delay [s/veh]	39.84					
Intersection LOS	D					
Intersection V/C	0.928					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	60.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.099

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	347	200	1060	1348	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	347	200	1060	1348	0
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	12	0	0	0	0	106	61	283	359	0
Total Analysis Volume [veh/h]	0	0	46	0	0	0	0	425	245	1130	1437	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		22	22	89	115	115
g / C, Green / Cycle		0.18	0.18	0.74	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.12	0.16	0.94	0.38	0.38
s, saturation flow rate [veh/h]		3618	1556	1200	1900	1900
c, Capacity [veh/h]		651	280	892	1827	1827
d1, Uniform Delay [s]		45.67	47.84	15.39	0.14	0.14
k, delay calibration		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.42	3.40	129.05	0.64	0.64
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

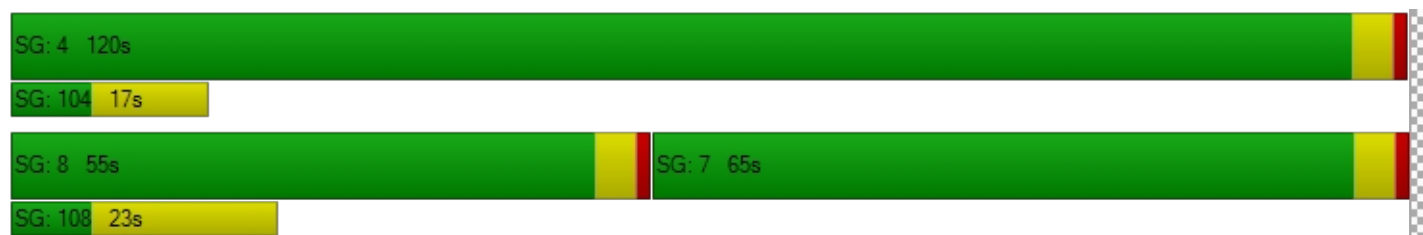
X, volume / capacity		0.65	0.87	1.27	0.39	0.39
d, Delay for Lane Group [s/veh]		46.09	51.24	144.44	0.78	0.78
Lane Group LOS		D	D	F	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		5.92	7.37	25.84	0.32	0.32
50th-Percentile Queue Length [ft]		148.01	184.22	646.08	8.08	8.08
95th-Percentile Queue Length [veh]		9.91	11.82	40.73	0.58	0.58
95th-Percentile Queue Length [ft]		247.77	295.52	1018.23	14.55	14.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.09	51.24	144.44	0.78	0.78
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			47.97			64.02		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	60.70											
Intersection LOS	E											
Intersection V/C	1.099											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	40	40	20	30	30	20	527	23	60	1248	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	40	40	20	30	30	20	527	23	60	1248	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	13	13	7	11	11	6	152	6	16	332	0
Total Analysis Volume [veh/h]	19	52	52	29	44	44	23	610	24	64	1326	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	93	93	93	93
g / C, Green / Cycle	0.15	0.15	0.78	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.19	0.19	0.40	0.40
s, saturation flow rate [veh/h]	1659	1290	1606	1729	1741	1729
c, Capacity [veh/h]	242	225	1281	1344	1386	1344
d1, Uniform Delay [s]	46.68	47.86	3.54	3.65	4.71	4.92
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.45	0.69	0.44	0.43	1.33	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

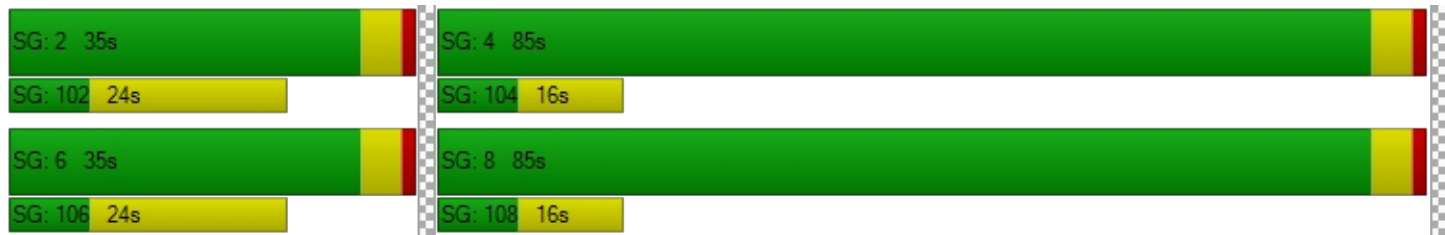
X, volume / capacity	0.43	0.52	0.24	0.24	0.51	0.51
d, Delay for Lane Group [s/veh]	47.13	48.55	3.98	4.08	6.03	6.31
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.84	3.35	1.82	1.97	5.56	5.68
50th-Percentile Queue Length [ft]	71.08	83.85	45.48	49.32	138.91	142.08
95th-Percentile Queue Length [veh]	5.12	6.04	3.27	3.55	9.42	9.59
95th-Percentile Queue Length [ft]	127.95	150.93	81.87	88.78	235.56	239.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.13	47.13	48.55	48.55	48.55	3.98	4.03	0.00	6.03	6.18	6.31
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		47.13		48.55			4.03			6.17		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]		9.68										
Intersection LOS		A										
Intersection V/C		0.494										

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.695

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	293	890	30	10	640	85	30	159	20	311	363	595
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	293	890	30	10	640	85	30	159	20	311	363	595
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	229	8	3	172	23	9	47	6	82	96	157
Total Analysis Volume [veh/h]	302	918	31	11	689	91	35	188	24	329	384	629
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	60	60	2	29	29	27	27	27	44	44	82
g / C, Green / Cycle	0.28	0.50	0.50	0.01	0.24	0.24	0.23	0.23	0.23	0.37	0.37	0.68
(v / s)_j Volume / Saturation Flow Rate	0.09	0.25	0.25	0.01	0.21	0.21	0.03	0.10	0.02	0.23	0.20	0.40
s, saturation flow rate [veh/h]	3514	1900	1868	1810	1900	1783	1007	1900	1508	1416	1900	1578
c, Capacity [veh/h]	968	955	939	24	457	428	110	432	343	509	702	1078
d1, Uniform Delay [s]	34.46	19.81	19.85	58.80	43.79	44.07	56.10	39.73	36.38	30.78	29.91	10.02
k, delay calibration	0.50	0.50	0.50	0.04	0.28	0.30	0.04	0.04	0.04	0.13	0.05	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.86	1.92	5.28	12.32	15.63	0.61	0.26	0.03	1.61	0.34	2.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

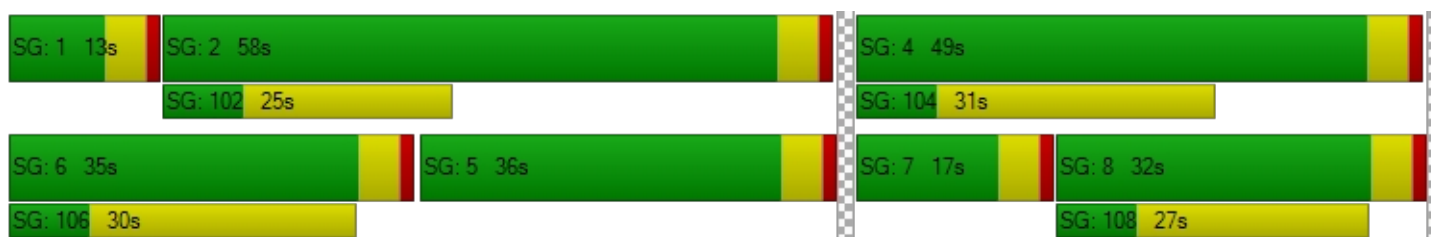
X, volume / capacity	0.31	0.50	0.50	0.47	0.87	0.89	0.32	0.43	0.07	0.65	0.55	0.58
d, Delay for Lane Group [s/veh]	35.30	21.67	21.77	64.08	56.10	59.70	56.71	39.98	36.41	32.39	30.25	12.33
Lane Group LOS	D	C	C	E	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.59	9.07	9.01	0.36	12.73	12.67	1.05	4.75	0.55	7.52	8.79	8.73
50th-Percentile Queue Length [ft]	89.77	226.87	225.20	9.10	318.35	316.66	26.34	118.78	13.87	187.93	219.75	218.16
95th-Percentile Queue Length [veh]	6.46	14.02	13.93	0.66	18.59	18.50	1.90	8.33	1.00	12.01	13.65	13.57
95th-Percentile Queue Length [ft]	161.59	350.38	348.26	16.39	464.66	462.58	47.41	208.15	24.96	300.34	341.31	339.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.30	21.72	21.77	64.08	57.62	59.70	56.71	39.98	36.41	32.39	30.25	12.33
Movement LOS	D	C	C	E	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	25.00			57.95			42.01			22.38		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	32.37											
Intersection LOS	C											
Intersection V/C	0.695											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.445

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	37	520	580	90	170	153
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	520	580	90	170	153
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	140	156	24	47	42
Total Analysis Volume [veh/h]	40	560	624	97	186	168
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	70	70	13	13
g / C, Green / Cycle	0.78	0.78	0.70	0.70	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.33	0.06	0.10	0.11
s, saturation flow rate [veh/h]	890	1900	1900	1592	1810	1522
c, Capacity [veh/h]	674	1475	1324	1109	238	200
d1, Uniform Delay [s]	3.81	3.54	6.85	4.90	42.02	42.38
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.74	1.21	0.16	2.14	3.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.38	0.47	0.09	0.78	0.84
d, Delay for Lane Group [s/veh]	3.98	4.28	8.06	5.05	44.16	45.99
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.15	2.58	5.17	0.57	4.50	4.17
50th-Percentile Queue Length [ft]	3.72	64.56	129.16	14.32	112.41	104.20
95th-Percentile Queue Length [veh]	0.27	4.65	8.89	1.03	7.97	7.50
95th-Percentile Queue Length [ft]	6.70	116.22	222.35	25.78	199.34	187.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	3.98	4.28	8.06	5.05	44.16	45.99
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.26		7.65		45.03	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	14.34					
Intersection LOS	B					
Intersection V/C	0.445					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	684	73	144	793	270	114	350	158	210	260	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	684	73	144	793	270	114	350	158	210	260	120
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	181	19	38	209	71	30	92	42	55	68	31
Total Analysis Volume [veh/h]	95	724	77	152	837	285	120	369	167	220	273	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	45	45	12	49	49	25	25	25	19	19	19
g / C, Green / Cycle	0.07	0.37	0.37	0.10	0.41	0.41	0.21	0.21	0.21	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.20	0.05	0.08	0.23	0.18	0.07	0.19	0.11	0.12	0.14	0.08
s, saturation flow rate [veh/h]	1810	3618	1530	1810	3618	1553	1810	1900	1543	1810	1900	1548
c, Capacity [veh/h]	120	1353	572	180	1473	632	382	402	326	293	307	250
d1, Uniform Delay [s]	55.21	29.41	24.77	53.13	27.45	25.84	39.99	46.34	41.87	48.03	49.27	45.93
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.21	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.52	0.49	4.06	1.59	2.32	0.17	15.22	0.46	1.48	5.64	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

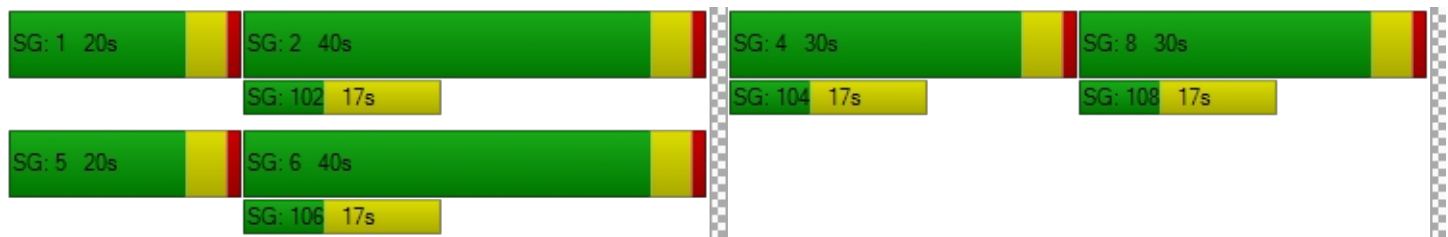
X, volume / capacity	0.79	0.54	0.13	0.84	0.57	0.45	0.31	0.92	0.51	0.75	0.89	0.50
d, Delay for Lane Group [s/veh]	59.51	30.93	25.26	57.19	29.04	28.15	40.16	61.56	42.33	49.51	54.91	46.51
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.31	1.52	4.93	10.24	6.76	3.00	12.32	4.38	6.34	8.40	3.45
50th-Percentile Queue Length [ft]	73.84	207.86	37.90	123.27	255.93	169.02	74.97	307.94	109.62	158.58	210.07	86.22
95th-Percentile Queue Length [veh]	5.32	13.04	2.73	8.57	15.48	11.03	5.40	18.07	7.82	10.47	13.16	6.21
95th-Percentile Queue Length [ft]	132.92	326.08	68.22	214.31	387.11	275.63	134.95	451.83	195.47	261.85	328.92	155.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	30.93	25.26	57.19	29.04	28.15	40.16	61.56	42.33	49.51	54.91	46.51
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	33.47			32.20			52.75			51.28		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.87											
Intersection LOS	D											
Intersection V/C	0.622											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	100	460	62	40	430	100	74	472	90	70	357	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	460	62	40	430	100	74	472	90	70	357	70
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	18	11	119	28	20	127	24	20	100	20
Total Analysis Volume [veh/h]	113	520	70	44	475	110	79	507	97	79	401	79
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.13	0.32	0.05	0.32	0.08	0.27	0.06	0.09	0.21	0.05
s, saturation flow rate [veh/h]	843	1853	839	1831	998	1900	1571	906	1900	1562
c, Capacity [veh/h]	275	861	276	850	300	726	601	229	726	597
d1, Uniform Delay [s]	23.08	12.63	21.02	12.65	21.87	15.62	12.21	25.43	14.52	12.06
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.48	4.42	1.24	4.52	0.17	0.46	0.05	0.33	0.24	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

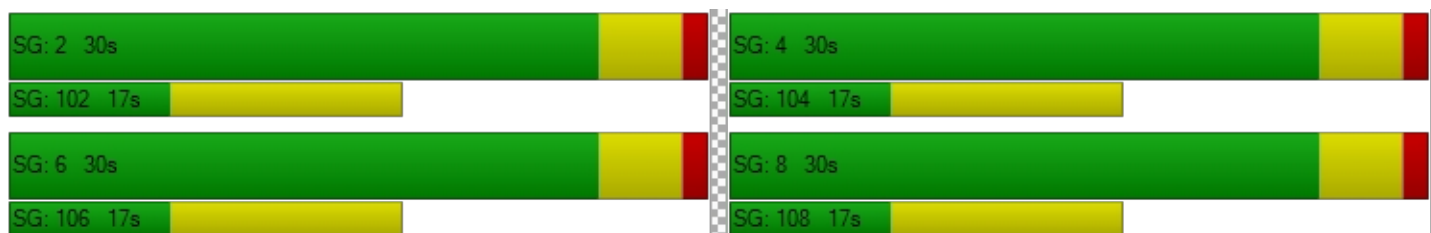
X, volume / capacity	0.41	0.69	0.16	0.69	0.26	0.70	0.16	0.34	0.55	0.13
d, Delay for Lane Group [s/veh]	27.56	17.05	22.26	17.18	22.05	16.08	12.25	25.76	14.76	12.10
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.77	6.49	0.59	6.27	0.92	5.06	0.75	1.02	3.70	0.60
50th-Percentile Queue Length [ft]	44.32	162.35	14.80	156.87	22.96	126.38	18.74	25.49	92.43	15.08
95th-Percentile Queue Length [veh]	3.19	10.67	1.07	10.38	1.65	8.74	1.35	1.84	6.65	1.09
95th-Percentile Queue Length [ft]	79.77	266.83	26.64	259.57	41.32	218.57	33.74	45.89	166.37	27.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.56	17.05	17.05	22.26	17.18	17.18	22.05	16.08	12.25	25.76	14.76	12.10
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.74			17.53			16.23			15.94		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.17											
Intersection LOS	B											
Intersection V/C	0.586											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.705

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	64	1124	110	71	1137	141	80	432	157	130	327	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	1124	110	71	1137	141	80	432	157	130	327	72
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	304	30	20	315	39	21	112	41	35	88	19
Total Analysis Volume [veh/h]	69	1216	119	79	1260	156	83	448	163	140	352	78
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	56	56	68	57	57	43	30	30	43	32	32
g / C, Green / Cycle	0.56	0.47	0.47	0.56	0.47	0.47	0.36	0.25	0.25	0.36	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.12	0.36	0.36	0.13	0.38	0.39	0.07	0.24	0.11	0.12	0.19	0.05
s, saturation flow rate [veh/h]	574	1900	1816	605	1900	1777	1209	1900	1506	1174	1900	1509
c, Capacity [veh/h]	280	894	855	304	897	840	349	477	378	292	505	401
d1, Uniform Delay [s]	20.63	26.07	26.37	18.91	26.83	27.49	27.61	43.99	37.69	30.39	39.65	34.06
k, delay calibration	0.50	0.50	0.50	0.40	0.50	0.50	0.04	0.17	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	5.91	6.67	1.65	7.41	9.42	0.13	13.32	0.29	0.46	0.65	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

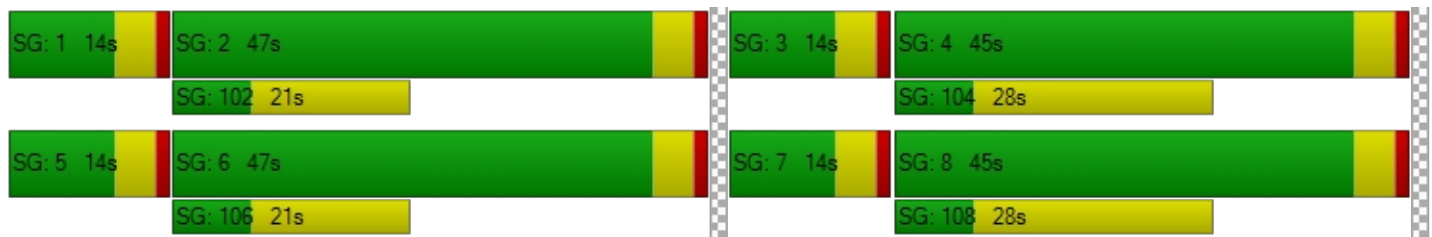
X, volume / capacity	0.25	0.76	0.77	0.26	0.80	0.83	0.24	0.94	0.43	0.48	0.70	0.19
d, Delay for Lane Group [s/veh]	22.72	31.99	33.03	20.56	34.23	36.91	27.74	57.30	37.98	30.84	40.30	34.15
Lane Group LOS	C	C	C	C	C	D	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.98	16.70	16.60	1.08	18.53	18.83	1.60	14.56	4.02	2.80	9.31	1.76
50th-Percentile Queue Length [ft]	24.55	417.59	415.12	27.09	463.34	470.77	39.95	364.09	100.51	70.06	232.71	44.11
95th-Percentile Queue Length [veh]	1.77	23.41	23.29	1.95	25.59	25.95	2.88	20.82	7.24	5.04	14.31	3.18
95th-Percentile Queue Length [ft]	44.20	585.16	582.19	48.76	639.85	648.68	71.90	520.56	180.93	126.11	357.80	79.40

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.72	32.45	33.03	20.56	35.39	36.91	27.74	57.30	37.98	30.84	40.30	34.15
Movement LOS	C	C	C	C	D	D	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	32.02			34.76			49.23			37.14		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.58											
Intersection LOS	D											
Intersection V/C	0.705											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	53	196	40	20	160	30	50	587	50	30	486	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	53	196	40	20	160	30	50	587	50	30	486	62
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	55	11	6	51	10	13	148	13	8	136	17
Total Analysis Volume [veh/h]	59	219	45	26	205	38	50	593	50	34	543	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	82	82	82	82
g / C, Green / Cycle	0.24	0.24	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.22	0.17	0.06	0.34	0.04	0.33
s, saturation flow rate [veh/h]	1442	1589	822	1867	799	1853
c, Capacity [veh/h]	387	420	474	1269	454	1260
d1, Uniform Delay [s]	44.31	40.36	15.75	9.38	16.10	9.18
k, delay calibration	0.27	0.14	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.12	2.04	0.45	1.45	0.32	1.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

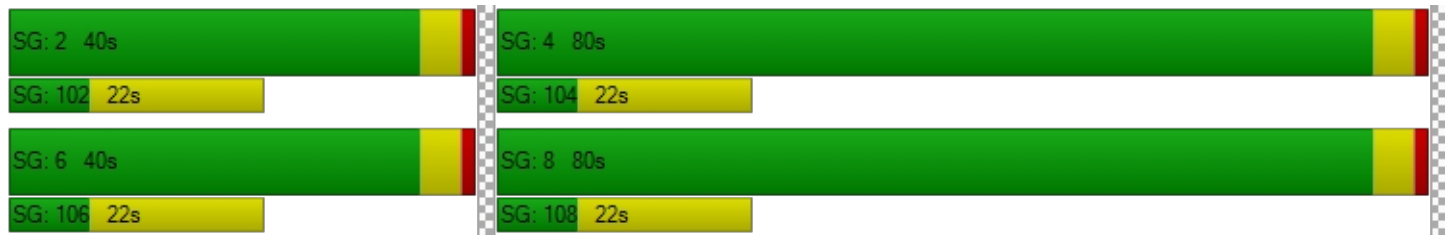
X, volume / capacity	0.84	0.64	0.11	0.51	0.07	0.49
d, Delay for Lane Group [s/veh]	55.43	42.40	16.20	10.83	16.42	10.53
Lane Group LOS	E	D	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	10.49	7.27	0.77	7.91	0.53	7.37
50th-Percentile Queue Length [ft]	262.24	181.69	19.34	197.85	13.24	184.19
95th-Percentile Queue Length [veh]	15.80	11.69	1.39	12.53	0.95	11.82
95th-Percentile Queue Length [ft]	395.03	292.22	34.81	313.19	23.83	295.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.43	55.43	55.43	42.40	42.40	42.40	16.20	10.83	10.83	16.42	10.53	10.53
Movement LOS	E	E	E	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	55.43			42.40			11.22			10.84		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	22.83											
Intersection LOS	C											
Intersection V/C	0.568											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	92	902	60	80	915	80	80	495	70	180	409	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	92	902	60	80	915	80	80	495	70	180	409	27
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	249	17	21	241	21	21	130	18	50	114	8
Total Analysis Volume [veh/h]	102	997	66	84	965	84	84	519	73	200	455	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	61	52	52	61	51	51	50	34	34	50	40	40
g / C, Green / Cycle	0.51	0.43	0.43	0.51	0.43	0.43	0.41	0.29	0.29	0.41	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.14	0.28	0.28	0.12	0.28	0.28	0.08	0.27	0.05	0.18	0.24	0.02
s, saturation flow rate [veh/h]	712	1900	1846	693	1900	1828	1085	1900	1526	1141	1900	1502
c, Capacity [veh/h]	327	818	795	318	808	777	337	545	437	322	633	500
d1, Uniform Delay [s]	19.24	27.10	27.18	18.94	27.51	27.63	24.54	41.97	32.04	28.30	35.07	27.21
k, delay calibration	0.50	0.50	0.50	0.34	0.50	0.50	0.07	0.34	0.04	0.04	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.48	4.10	4.30	1.37	4.18	4.48	0.23	22.20	0.07	0.73	2.36	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

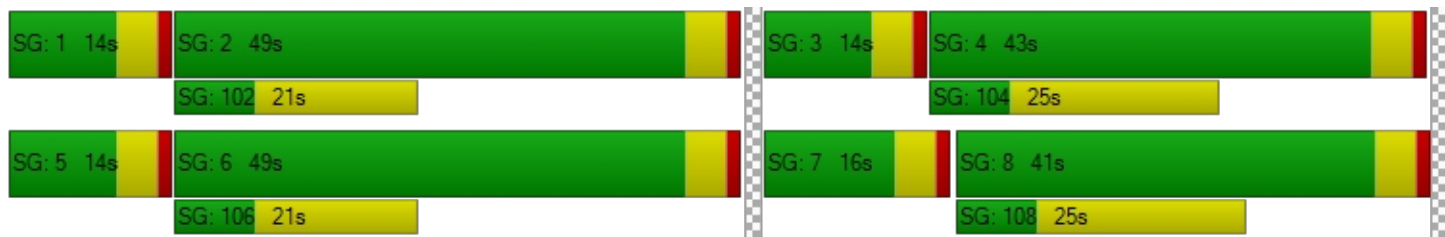
X, volume / capacity	0.31	0.66	0.66	0.26	0.66	0.67	0.25	0.95	0.17	0.62	0.72	0.06
d, Delay for Lane Group [s/veh]	21.72	31.20	31.48	20.32	31.68	32.11	24.77	64.17	32.11	29.04	37.42	27.23
Lane Group LOS	C	C	C	C	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.68	12.97	12.78	1.31	12.95	12.70	1.47	18.10	1.59	3.75	11.84	0.59
50th-Percentile Queue Length [ft]	42.08	324.33	319.41	32.74	323.65	317.56	36.64	452.58	39.78	93.78	295.98	14.68
95th-Percentile Queue Length [veh]	3.03	18.88	18.64	2.36	18.85	18.55	2.64	25.08	2.86	6.75	17.48	1.06
95th-Percentile Queue Length [ft]	75.74	472.00	465.96	58.94	471.17	463.68	65.95	627.02	71.60	168.80	437.06	26.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.72	31.33	31.48	20.32	31.88	32.11	24.77	64.17	32.11	29.04	37.42	27.23
Movement LOS	C	C	C	C	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	30.50			31.04			55.81			34.53		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	36.10											
Intersection LOS	D											
Intersection V/C	0.665											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	65	525	140	20	253	30	50	550	70	10	486	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	525	140	20	253	30	50	550	70	10	486	63
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	145	39	5	69	8	13	145	18	3	142	18
Total Analysis Volume [veh/h]	72	581	155	22	275	33	53	581	74	12	567	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.07	0.34	0.11	0.03	0.16	0.02	0.07	0.34	0.06	0.02	0.33	0.06
s, saturation flow rate [veh/h]	1003	1710	1373	761	1710	1413	772	1710	1329	762	1710	1299
c, Capacity [veh/h]	418	743	597	209	743	614	181	742	577	171	742	564
d1, Uniform Delay [s]	17.73	16.94	12.61	26.70	13.33	11.45	30.39	16.99	11.88	29.46	16.78	11.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.16	0.04	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	8.01	1.06	1.01	1.41	0.17	0.33	2.66	0.04	0.06	2.19	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

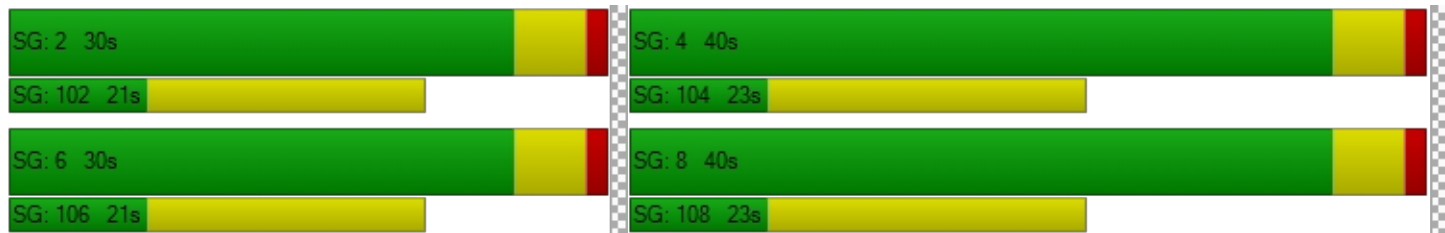
X, volume / capacity	0.17	0.78	0.26	0.11	0.37	0.05	0.29	0.78	0.13	0.07	0.76	0.13
d, Delay for Lane Group [s/veh]	18.63	24.95	13.66	27.71	14.74	11.62	30.72	19.65	11.92	29.52	18.97	11.93
Lane Group LOS	B	C	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.90	8.61	1.56	0.37	2.88	0.30	0.83	7.48	0.62	0.18	7.13	0.62
50th-Percentile Queue Length [ft]	22.46	215.19	38.89	9.20	72.04	7.38	20.83	186.97	15.58	4.51	178.30	15.60
95th-Percentile Queue Length [veh]	1.62	13.42	2.80	0.66	5.19	0.53	1.50	11.96	1.12	0.33	11.51	1.12
95th-Percentile Queue Length [ft]	40.43	335.48	70.00	16.55	129.67	13.29	37.50	299.09	28.04	8.13	287.79	28.08

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.63	24.95	13.66	27.71	14.74	11.62	30.72	19.65	11.92	29.52	18.97	11.93
Movement LOS	B	C	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	22.22			15.29			19.67			18.37		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	19.58											
Intersection LOS	B											
Intersection V/C	0.680											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	50	425	120	40	503	130	110	440	150	190	470	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	425	120	40	503	130	110	440	150	190	470	80
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	117	33	11	134	35	30	120	41	55	135	23
Total Analysis Volume [veh/h]	55	469	132	43	535	138	120	479	163	219	541	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	41	41	31	31	31	8	25	25	10	28	28
g / C, Green / Cycle	0.06	0.46	0.46	0.35	0.35	0.35	0.08	0.27	0.27	0.12	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.03	0.25	0.09	0.05	0.18	0.19	0.07	0.25	0.11	0.12	0.17	0.18
s, saturation flow rate [veh/h]	1810	1900	1541	931	1900	1712	1810	1900	1476	1810	1900	1761
c, Capacity [veh/h]	107	869	704	212	659	594	152	521	404	209	581	538
d1, Uniform Delay [s]	41.15	17.63	14.52	34.76	23.52	23.72	40.49	31.77	26.71	39.85	26.21	26.35
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.22	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.42	2.40	0.59	2.14	3.01	3.60	3.40	12.68	0.24	46.55	0.31	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

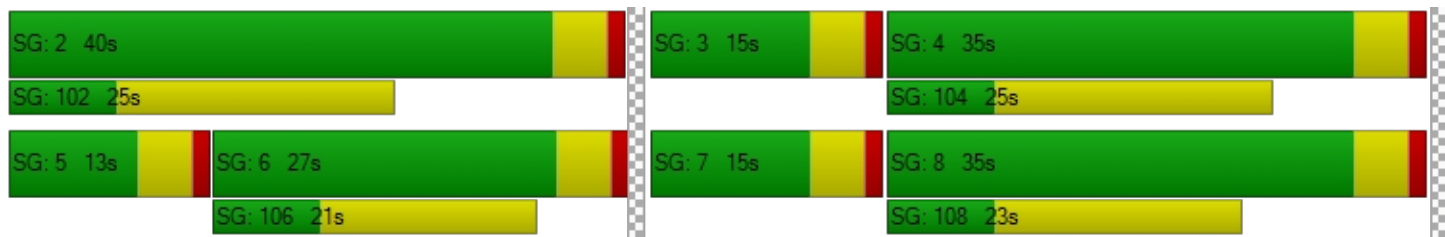
X, volume / capacity	0.51	0.54	0.19	0.20	0.53	0.55	0.79	0.92	0.40	1.05	0.56	0.57
d, Delay for Lane Group [s/veh]	42.57	20.04	15.11	36.90	26.53	27.32	43.89	44.45	26.95	86.40	26.53	26.71
Lane Group LOS	D	C	B	D	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.21	7.23	1.66	0.96	6.27	5.98	2.72	11.63	2.83	7.21	5.63	5.39
50th-Percentile Queue Length [ft]	30.36	180.85	41.44	24.07	156.72	149.62	67.99	290.71	70.73	180.34	140.86	134.77
95th-Percentile Queue Length [veh]	2.19	11.64	2.98	1.73	10.37	10.00	4.90	17.22	5.09	11.83	9.53	9.20
95th-Percentile Queue Length [ft]	54.66	291.12	74.60	43.33	259.37	249.92	122.38	430.53	127.32	295.65	238.18	229.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.57	20.04	15.11	36.90	26.80	27.32	43.89	44.45	26.95	86.40	26.60	26.71
Movement LOS	D	C	B	D	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	20.93			27.51			40.62			41.99		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.54											
Intersection LOS	C											
Intersection V/C	0.620											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	44.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Northeastbound			Southwestbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			0.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	20	350	60	250	0	390	220	896	0	0	1020	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	350	60	250	0	390	220	896	0	0	1020	160
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	0.8935	0.8935	1.0000	1.0000	0.9224	0.9224
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	115	20	68	0	106	62	251	0	0	276	43
Total Analysis Volume [veh/h]	26	459	79	273	0	425	246	1003	0	0	1106	173
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			0			173		
Bicycle Volume [bicycles/h]	32			6			0			28		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	8	0	7	0	4	5	2	0	0	6	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	7	7	0	7	0	7	7	7	0	0	7	0
Maximum Green [s]	15	30	0	30	0	30	15	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	35	0	22	0	45	21	63	0	0	42	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	4.0	4.0	0.0	0.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	18	0	0	20	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	No		No		No	No	Yes			Yes	
Maximum Recall	No	No		No		No	No	No			No	
Pedestrian Recall	No	No		No		No	No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	4	29	29	11	58	16	65	44	44
g / C, Green / Cycle	0.03	0.25	0.25	0.09	0.48	0.14	0.54	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.16	0.08	0.15	0.14	0.28	0.34	0.36
s, saturation flow rate [veh/h]	1810	1900	1633	3514	2816	1810	3618	1900	1773
c, Capacity [veh/h]	62	466	400	334	1354	247	1971	703	656
d1, Uniform Delay [s]	56.79	39.98	40.77	53.28	19.04	51.77	17.20	35.91	37.27
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.40	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.68	0.45	0.69	1.89	0.05	50.14	0.94	17.94	29.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

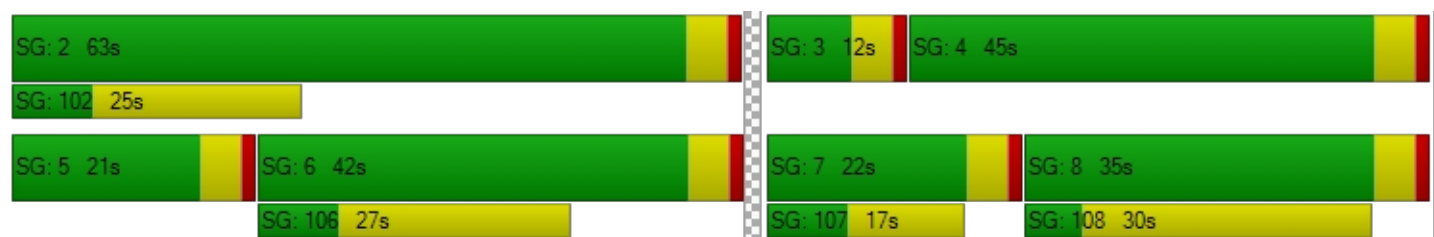
X, volume / capacity	0.42	0.59	0.66	0.82	0.31	1.00	0.51	0.91	0.98
d, Delay for Lane Group [s/veh]	58.47	40.42	41.46	55.16	19.09	101.91	18.14	53.85	66.88
Lane Group LOS	E	D	D	E	B	F	B	D	E
Critical Lane Group	No	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.80	7.21	7.07	4.13	3.62	11.20	9.72	20.32	22.84
50th-Percentile Queue Length [ft]	20.06	180.28	176.68	103.15	90.39	279.96	242.95	507.89	571.05
95th-Percentile Queue Length [veh]	1.44	11.62	11.43	7.43	6.51	16.69	14.83	27.71	30.68
95th-Percentile Queue Length [ft]	36.10	290.38	285.67	185.67	162.70	417.16	370.77	692.68	767.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.47	40.84	41.46	55.16	0.00	19.09	101.91	18.14	0.00	0.00	59.34	66.88
Movement LOS	E	D	D	E		B	F	B			E	E
d_A, Approach Delay [s/veh]	41.74			33.20			34.64			60.36		
Approach LOS	D			C			C			E		
d_I, Intersection Delay [s/veh]	44.11											
Intersection LOS	D											
Intersection V/C	0.736											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1140	70	60	1310	30	60	110	50	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1140	70	60	1310	30	60	110	50	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	306	19	15	338	8	18	33	15	11	29	7
Total Analysis Volume [veh/h]	32	1223	75	62	1352	31	72	131	60	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.34	0.35	0.14	0.37	0.37	0.17	0.12
s, saturation flow rate [veh/h]	398	1900	1855	431	1900	1878	1565	1565
c, Capacity [veh/h]	263	1252	1222	285	1252	1237	411	409
d1, Uniform Delay [s]	13.83	7.10	7.12	13.98	7.32	7.35	28.63	26.70
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	1.56	1.62	1.74	1.77	1.81	0.62	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

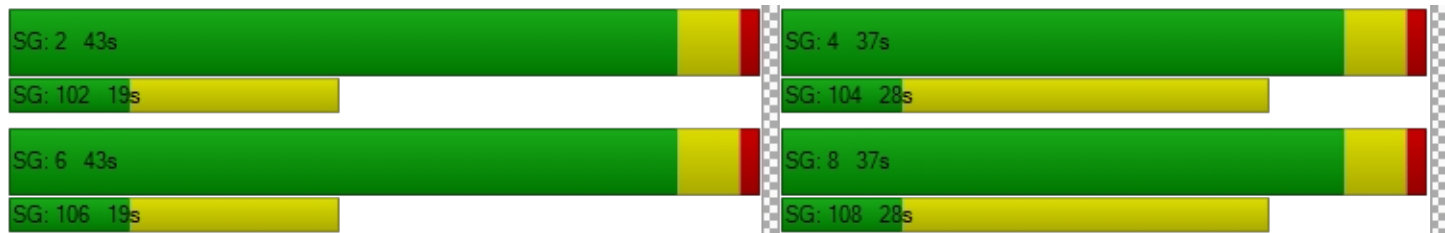
X, volume / capacity	0.12	0.52	0.53	0.22	0.55	0.56	0.64	0.46
d, Delay for Lane Group [s/veh]	14.77	8.66	8.74	15.72	9.09	9.16	29.25	27.00
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.40	5.03	4.97	0.79	5.52	5.51	4.52	2.96
50th-Percentile Queue Length [ft]	9.94	125.71	124.29	19.86	137.98	137.84	113.12	74.04
95th-Percentile Queue Length [veh]	0.72	8.71	8.63	1.43	9.37	9.36	8.01	5.33
95th-Percentile Queue Length [ft]	17.89	217.65	215.71	35.76	234.30	234.11	200.33	133.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.77	8.70	8.74	15.72	9.13	9.16	29.25	29.25	29.25	27.00	27.00	27.00
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.85			9.41			29.25			27.00		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.82											
Intersection LOS	B											
Intersection V/C	0.535											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	1062	30	10	1055	10	30	160	60	10	170	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1062	30	10	1055	10	30	160	60	10	170	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	280	8	3	274	3	9	49	18	3	47	3
Total Analysis Volume [veh/h]	42	1120	32	10	1095	10	36	194	73	11	187	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	18	18
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.08	0.30	0.31	0.02	0.29	0.29	0.17	0.11
s, saturation flow rate [veh/h]	517	1900	1876	495	1900	1892	1739	1854
c, Capacity [veh/h]	336	1243	1227	320	1243	1237	452	475
d1, Uniform Delay [s]	11.98	6.87	6.88	11.66	6.74	6.74	28.42	26.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	1.26	1.28	0.18	1.16	1.17	0.65	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

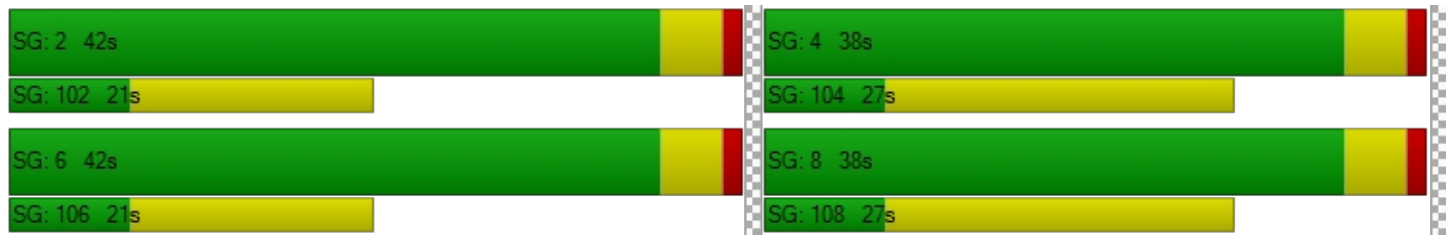
X, volume / capacity	0.13	0.47	0.47	0.03	0.45	0.45	0.67	0.44
d, Delay for Lane Group [s/veh]	12.74	8.12	8.16	11.84	7.89	7.91	29.06	26.80
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.47	4.42	4.40	0.11	4.14	4.14	5.17	3.31
50th-Percentile Queue Length [ft]	11.80	110.62	109.92	2.70	103.61	103.39	129.26	82.83
95th-Percentile Queue Length [veh]	0.85	7.87	7.84	0.19	7.46	7.44	8.90	5.96
95th-Percentile Queue Length [ft]	21.25	196.86	195.89	4.85	186.50	186.10	222.48	149.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.74	8.14	8.16	11.84	7.90	7.91	29.06	29.06	29.06	26.80	26.80	26.80
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.30			7.94			29.06			26.80		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.76											
Intersection LOS	B											
Intersection V/C	0.480											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	40	1254	20	30	1330	90	30	100	30	110	90	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1254	20	30	1330	90	30	100	30	110	90	40
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	370	6	8	339	23	8	27	8	32	26	11
Total Analysis Volume [veh/h]	47	1481	24	31	1356	92	32	108	32	126	103	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	21	21	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.13	0.40	0.40	0.09	0.38	0.39	0.13	0.02	0.18	0.03
s, saturation flow rate [veh/h]	374	1900	1887	354	1900	1847	1063	1525	1300	1564
c, Capacity [veh/h]	226	1179	1170	215	1179	1145	337	404	414	414
d1, Uniform Delay [s]	18.55	9.56	9.58	18.30	9.36	9.43	23.86	22.09	26.24	22.28
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	2.67	2.71	1.40	2.45	2.60	0.31	0.03	0.43	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.64	0.64	0.14	0.62	0.63	0.42	0.08	0.55	0.11
d, Delay for Lane Group [s/veh]	20.63	12.23	12.29	19.70	11.81	12.04	24.17	22.12	26.68	22.32
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.72	7.54	7.54	0.47	7.12	7.10	2.03	0.44	3.72	0.63
50th-Percentile Queue Length [ft]	18.11	188.49	188.45	11.66	178.11	177.38	50.66	10.89	93.10	15.79
95th-Percentile Queue Length [veh]	1.30	12.04	12.04	0.84	11.50	11.46	3.65	0.78	6.70	1.14
95th-Percentile Queue Length [ft]	32.60	301.06	301.02	20.98	287.55	286.59	91.19	19.60	167.58	28.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.63	12.26	12.29	19.70	11.92	12.04	24.17	24.17	22.12	26.68	26.68	22.32
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.51			12.09			23.79			25.95		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.95											
Intersection LOS	B											
Intersection V/C	0.574											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1434	100	80	1360	240	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1434	100	80	1360	240	90
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	426	30	22	378	66	25
Total Analysis Volume [veh/h]	1704	119	89	1513	265	99
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.49	0.50	0.35	0.43	0.15	0.06
s, saturation flow rate [veh/h]	1863	1807	255	3547	1728	1560
c, Capacity [veh/h]	1337	1297	182	2547	310	280
d1, Uniform Delay [s]	7.00	7.21	24.84	6.23	35.71	32.28
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.82	3.20	9.09	1.03	6.65	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

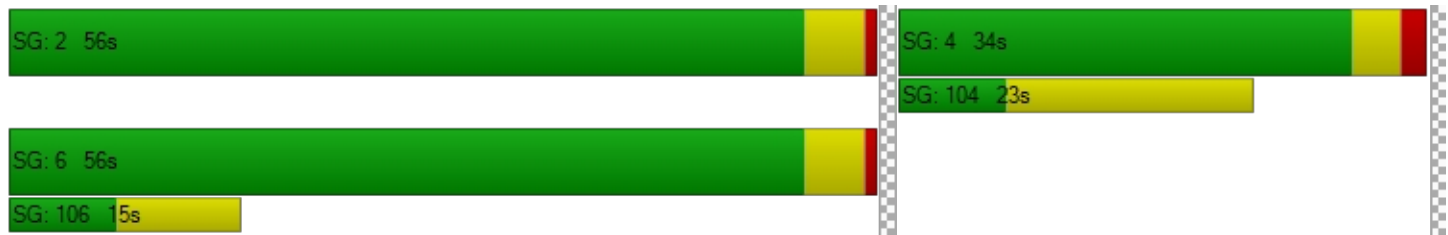
X, volume / capacity	0.68	0.70	0.49	0.59	0.85	0.35
d, Delay for Lane Group [s/veh]	9.82	10.41	33.93	7.26	42.36	33.04
Lane Group LOS	A	B	C	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.08	8.40	2.11	5.86	6.01	1.90
50th-Percentile Queue Length [ft]	201.91	209.89	52.85	146.42	150.30	47.39
95th-Percentile Queue Length [veh]	12.74	13.15	3.81	9.83	10.03	3.41
95th-Percentile Queue Length [ft]	318.43	328.68	95.13	245.65	250.82	85.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.09	10.41	33.93	7.26	42.36	33.04
Movement LOS	B	B	C	A	D	C
d_A, Approach Delay [s/veh]	10.11		8.74		39.83	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	12.39					
Intersection LOS	B					
Intersection V/C	0.658					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	1084	84	40	1081	40	94	400	80	30	280	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1084	84	40	1081	40	94	400	80	30	280	30
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	302	23	10	274	10	24	104	21	9	83	9
Total Analysis Volume [veh/h]	22	1207	94	41	1097	41	98	416	83	35	331	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	27	24	24
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.40	0.40
(v / s)_j Volume / Saturation Flow Rate	0.04	0.35	0.35	0.10	0.30	0.30	0.37	0.24
s, saturation flow rate [veh/h]	502	1900	1836	430	1900	1867	1617	1672
c, Capacity [veh/h]	210	851	822	173	851	836	714	731
d1, Uniform Delay [s]	21.12	13.94	14.03	25.50	13.05	13.08	16.98	13.80
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	6.75	7.31	3.21	4.22	4.37	7.97	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

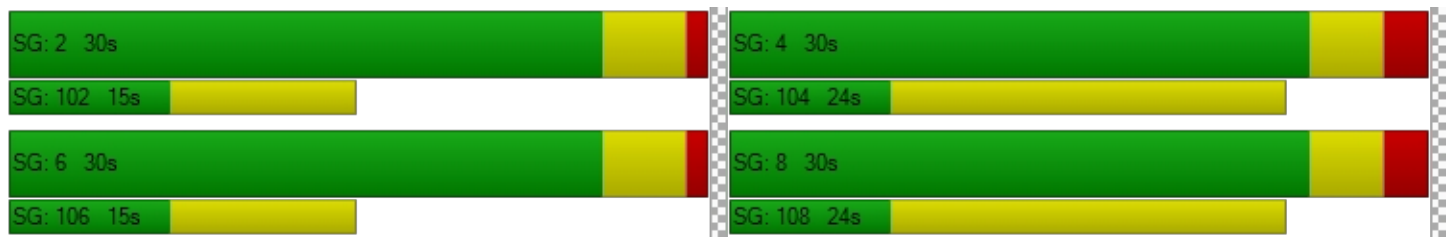
X, volume / capacity	0.10	0.77	0.78	0.24	0.67	0.68	0.84	0.55
d, Delay for Lane Group [s/veh]	22.12	20.69	21.35	28.72	17.27	17.45	24.96	14.54
Lane Group LOS	C	C	C	C	B	B	C	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.31	7.94	7.92	0.69	6.17	6.13	8.12	3.67
50th-Percentile Queue Length [ft]	7.67	198.55	197.94	17.15	154.19	153.33	202.94	91.80
95th-Percentile Queue Length [veh]	0.55	12.56	12.53	1.23	10.24	10.19	12.79	6.61
95th-Percentile Queue Length [ft]	13.80	314.09	313.30	30.86	256.02	254.86	319.76	165.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.12	20.99	21.35	28.72	17.36	17.45	24.96	24.96	24.96	14.54	14.54	14.54
Movement LOS	C	C	C	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	21.03			17.75			24.96			14.54		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.85											
Intersection LOS	B											
Intersection V/C	0.720											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.641

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	335	110	30	133	30	70	504	60	20	394	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	335	110	30	133	30	70	504	60	20	394	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	86	28	10	43	10	18	133	16	5	107	5
Total Analysis Volume [veh/h]	31	342	112	39	172	39	74	531	63	22	426	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	21	30	30
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.09	0.03	0.38	0.26
s, saturation flow rate [veh/h]	1223	1751	933	1863	1524	1751	1841
c, Capacity [veh/h]	409	601	185	639	523	949	990
d1, Uniform Delay [s]	17.97	17.50	27.13	14.28	13.30	11.58	9.86
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.97	0.56	0.22	0.06	4.37	1.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

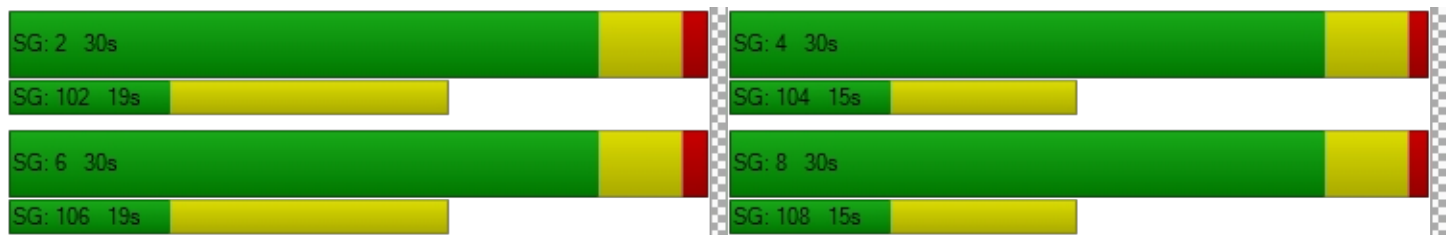
X, volume / capacity	0.08	0.76	0.21	0.27	0.07	0.70	0.47
d, Delay for Lane Group [s/veh]	18.05	19.47	27.69	14.50	13.36	15.95	11.49
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	5.14	0.54	1.57	0.33	6.51	3.68
50th-Percentile Queue Length [ft]	7.88	128.51	13.58	39.26	8.30	162.85	92.00
95th-Percentile Queue Length [veh]	0.57	8.86	0.98	2.83	0.60	10.70	6.62
95th-Percentile Queue Length [ft]	14.19	221.47	24.45	70.67	14.94	267.49	165.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.05	19.47	19.47	27.69	14.50	13.36	15.95	15.95	15.95	11.49	11.49	11.49
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.38			16.38			15.95			11.49		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.78											
Intersection LOS	B											
Intersection V/C	0.641											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.541

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	505	0	140	0	0	0	0	1431	628	50	1608	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	505	0	140	0	0	0	0	1431	628	50	1608	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	0	42	0	0	0	0	405	178	14	435	0
Total Analysis Volume [veh/h]	610	0	169	0	0	0	0	1618	710	54	1741	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	0	73	73	110	73	73	73
g / C, Green / Cycle	0.27	0.27	0.00	0.61	0.61	0.92	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.22	0.23	0.00	0.00	0.31	0.44	0.17	0.32	0.32
s, saturation flow rate [veh/h]	1810	1684	1863	276	5176	1615	317	3618	1900
c, Capacity [veh/h]	489	455	7	173	3159	1479	191	2208	1160
d1, Uniform Delay [s]	40.94	41.15	0.00	0.00	13.23	0.76	25.01	13.28	13.28
k, delay calibration	0.11	0.12	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.54	4.42	0.00	0.00	0.60	1.12	3.69	0.87	1.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.83	0.00	0.00	0.51	0.48	0.28	0.52	0.52
d, Delay for Lane Group [s/veh]	44.48	45.58	0.00	0.00	13.82	1.87	28.70	14.15	14.93
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	11.47	11.02	0.00	0.00	7.92	0.46	1.27	8.49	9.17
50th-Percentile Queue Length [ft]	286.79	275.62	0.00	0.00	197.91	11.48	31.71	212.35	229.33
95th-Percentile Queue Length [veh]	17.03	16.47	0.00	0.00	12.53	0.83	2.28	13.27	14.14
95th-Percentile Queue Length [ft]	425.65	411.76	0.00	0.00	313.26	20.67	57.09	331.84	353.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.86	45.58	45.58	0.00	0.00	0.00	0.00	13.82	1.87	28.70	14.42	14.93
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.01			0.00			10.18			14.85		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	17.42											
Intersection LOS	B											
Intersection V/C	0.541											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	35.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.948

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	299	108	0	235	33	14	187	80	15	128	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	299	108	0	235	33	14	187	80	15	128	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	86	31	0	74	10	4	57	25	5	40	6
Total Analysis Volume [veh/h]	23	344	124	0	295	41	17	229	98	19	161	25
Pedestrian Volume [ped/h]	10			5			6			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	517	483	482	443
Degree of Utilization, x	0.95	0.69	0.71	0.46

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	12.00	5.30	5.64	2.39
95th-Percentile Queue Length [ft]	299.92	132.60	141.02	59.81
Approach Delay [s/veh]	54.00	25.69	27.00	17.94
Approach LOS	F	D	D	C
Intersection Delay [s/veh]	34.97			
Intersection LOS	D			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	6.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	587	652	38	65	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	587	652	38	65	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	163	170	10	20	6
Total Analysis Volume [veh/h]	11	653	681	40	80	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	12	12	12	4
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.15
(v / s)_j Volume / Saturation Flow Rate	0.01	0.34	0.36	0.03	0.06
s, saturation flow rate [veh/h]	768	1900	1900	1588	1759
c, Capacity [veh/h]	379	901	901	753	270
d1, Uniform Delay [s]	9.85	5.20	5.32	3.50	9.42
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.42	0.49	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.72	0.76	0.05	0.39
d, Delay for Lane Group [s/veh]	9.86	5.63	5.82	3.52	9.76
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.80	0.86	0.03	0.38
50th-Percentile Queue Length [ft]	0.91	19.98	21.60	0.77	9.45
95th-Percentile Queue Length [veh]	0.07	1.44	1.56	0.06	0.68
95th-Percentile Queue Length [ft]	1.65	35.97	38.89	1.39	17.02

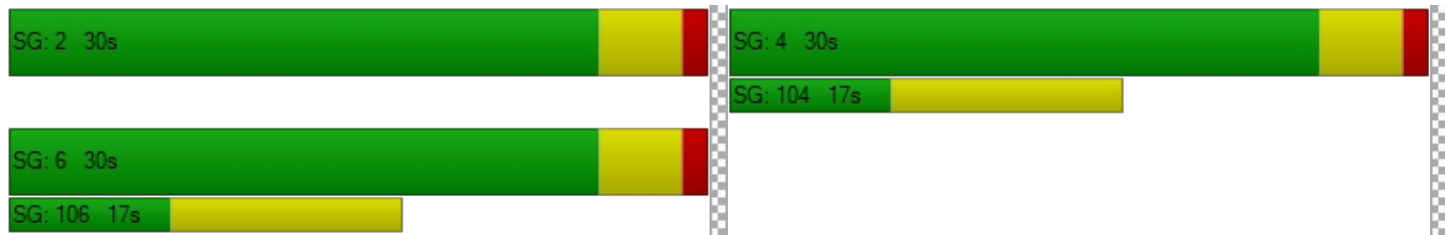


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.86	5.63	5.82	3.52	9.76	9.76
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.70		5.69		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.98					
Intersection LOS	A					
Intersection V/C	0.418					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	60	1340	10	10	1370	660	690	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	15	342	3	3	375	181	210	3	34
Total Analysis Volume [veh/h]	0	0	0	61	1369	10	10	1500	723	841	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		52	52	52	52	52	85	28	28
g / C, Green / Cycle		0.58	0.58	0.58	0.58	0.58	0.95	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate		0.17	0.36	0.36	0.03	0.41	0.45	0.24	0.09
s, saturation flow rate [veh/h]		355	1900	1895	391	3618	1615	3514	1600
c, Capacity [veh/h]		172	1109	1106	203	2111	1525	1103	502
d1, Uniform Delay [s]		29.85	12.22	12.22	21.62	13.29	0.25	27.75	23.20
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.66	2.64	2.65	0.46	2.06	1.06	1.12	0.31
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.36	0.62	0.62	0.05	0.71	0.47	0.76	0.29
d, Delay for Lane Group [s/veh]		35.52	14.85	14.87	22.08	15.35	1.31	28.87	23.51
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		1.52	10.41	10.40	0.17	9.94	0.45	7.91	2.26
50th-Percentile Queue Length [ft]		38.02	260.34	259.98	4.24	248.59	11.22	197.79	56.48
95th-Percentile Queue Length [veh]		2.74	15.71	15.69	0.30	15.11	0.81	12.52	4.07
95th-Percentile Queue Length [ft]		68.43	392.65	392.20	7.62	377.87	20.19	313.11	101.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.52	14.86	14.87	22.08	15.35	1.31	28.87	23.51	23.51
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			15.73			10.83			28.09		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	16.00											
Intersection LOS	B											
Intersection V/C	0.654											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	325	280	420	0	230	678	0	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	325	280	420	0	230	678	0	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	85	73	109	0	60	178	0	18
Total Analysis Volume [veh/h]	0	0	0	0	340	293	438	0	240	711	0	73
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.19	0.18	0.24	0.13	0.37	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		36.03	15.67	35.31	4.51	22.31	14.62
k, delay calibration		0.20	0.29	0.47	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		23.74	0.91	82.17	0.29	10.15	0.29
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.97	0.39	1.12	0.18	0.84	0.10
d, Delay for Lane Group [s/veh]		59.77	16.58	117.48	4.80	32.46	14.91
Lane Group LOS		E	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		9.73	4.10	17.22	1.35	14.91	0.90
50th-Percentile Queue Length [ft]		243.35	102.49	430.46	33.70	372.82	22.51
95th-Percentile Queue Length [veh]		14.85	7.38	25.55	2.43	21.25	1.62
95th-Percentile Queue Length [ft]		371.27	184.49	638.84	60.65	531.15	40.53

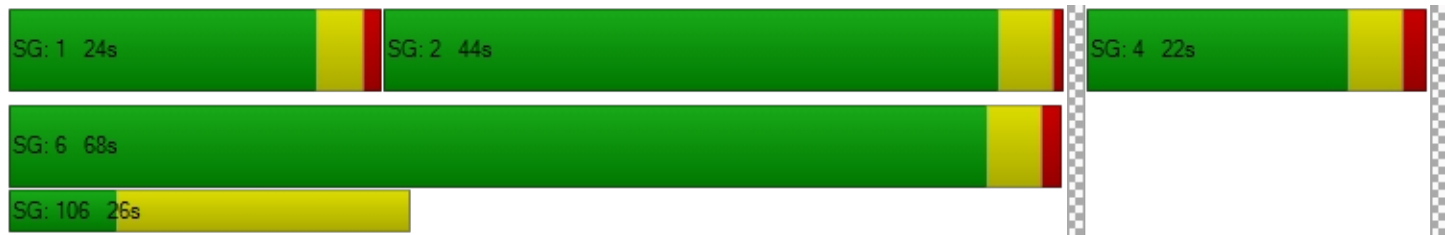


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	59.77	16.58	117.48	0.00	4.80	32.46	0.00	14.91
Movement LOS					E	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			39.78			77.59			30.82		
Approach LOS	A			D			E			C		
d_I, Intersection Delay [s/veh]	48.66											
Intersection LOS	D											
Intersection V/C	0.804											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	115	220	160	90	80	10	60	1216	60	0	907	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	115	220	160	90	80	10	60	1216	60	0	907	63
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	61	44	25	22	3	17	336	17	0	263	18
Total Analysis Volume [veh/h]	127	243	177	100	89	11	66	1346	66	0	1052	73
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	55	55	55	55	55
g / C, Green / Cycle	0.29	0.29	0.29	0.29	0.29	0.61	0.61	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.11	0.14	0.13	0.10	0.06	0.15	0.29	0.29	0.34	0.35
s, saturation flow rate [veh/h]	1131	1676	1337	1001	1634	448	3192	1623	1676	1628
c, Capacity [veh/h]	325	483	385	222	471	253	1946	989	1022	992
d1, Uniform Delay [s]	31.13	26.67	26.28	36.85	24.29	19.82	9.69	9.73	10.32	10.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.77	0.81	0.85	1.44	0.22	2.48	0.85	1.69	2.13	2.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.50	0.46	0.45	0.21	0.26	0.48	0.48	0.55	0.57
d, Delay for Lane Group [s/veh]	31.90	27.48	27.13	38.29	24.51	22.30	10.54	11.42	12.46	12.83
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.46	4.34	3.13	2.15	1.61	1.14	4.78	5.15	6.45	6.58
50th-Percentile Queue Length [ft]	61.39	108.49	78.21	53.74	40.37	28.48	119.53	128.73	161.18	164.44
95th-Percentile Queue Length [veh]	4.42	7.76	5.63	3.87	2.91	2.05	8.37	8.87	10.61	10.78
95th-Percentile Queue Length [ft]	110.51	193.90	140.77	96.74	72.67	51.27	209.17	221.76	265.28	269.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.90	27.48	27.13	38.29	24.51	24.51	22.30	10.81	11.42	0.00	12.63	12.83
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	28.39			31.40			11.35			12.64		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.76											
Intersection LOS	B											
Intersection V/C	0.491											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	100	784	120	169	1260	100	150	710	96	70	650	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	784	120	169	1260	100	150	710	96	70	650	60
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	207	32	51	379	30	43	206	28	20	184	17
Total Analysis Volume [veh/h]	106	829	127	203	1516	120	174	823	111	79	734	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	36	36	46	37	37	35	27	27	35	23	23
g / C, Green / Cycle	0.51	0.40	0.40	0.51	0.41	0.41	0.39	0.30	0.30	0.39	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.19	0.23	0.08	0.12	0.43	0.08	0.18	0.25	0.26	0.10	0.21	0.22
s, saturation flow rate [veh/h]	554	3547	1558	1643	3547	1563	988	1900	1773	811	1900	1805
c, Capacity [veh/h]	261	1404	617	834	1456	642	366	564	526	290	488	464
d1, Uniform Delay [s]	20.18	21.45	17.90	12.46	26.56	16.95	21.40	29.73	30.01	20.90	31.66	31.85
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.25	0.27	0.11	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.66	1.83	0.75	0.69	34.96	0.64	4.37	7.84	10.29	0.50	6.14	7.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.41	0.59	0.21	0.24	1.04	0.19	0.47	0.84	0.87	0.27	0.83	0.85
d, Delay for Lane Group [s/veh]	24.84	23.28	18.65	13.16	61.52	17.60	25.77	37.56	40.30	21.41	37.80	39.47
Lane Group LOS	C	C	B	B	F	B	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.41	6.96	1.82	2.34	21.70	1.65	2.81	10.44	10.43	1.07	8.97	8.93
50th-Percentile Queue Length [ft]	35.30	174.04	45.44	58.57	542.52	41.34	70.26	260.95	260.72	26.83	224.27	223.25
95th-Percentile Queue Length [veh]	2.54	11.29	3.27	4.22	30.20	2.98	5.06	15.74	15.72	1.93	13.88	13.83
95th-Percentile Queue Length [ft]	63.54	282.21	81.79	105.43	754.99	74.41	126.47	393.41	393.12	48.30	347.07	345.77

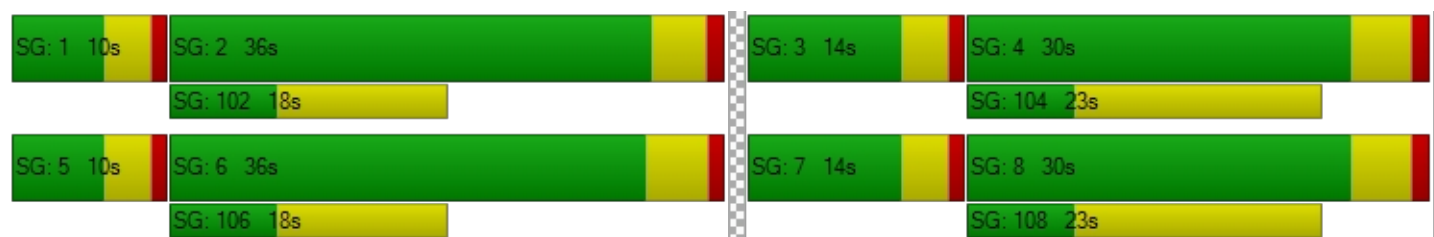


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.84	23.28	18.65	13.16	61.52	17.60	25.77	38.72	40.30	21.41	38.54	39.47
Movement LOS	C	C	B	B	F	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	22.88			53.32			36.84			37.08		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	40.05											
Intersection LOS	D											
Intersection V/C	0.752											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.722

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	73	1025	136	0	912	90	168	1084	120	70	814	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	1025	136	0	912	90	168	1084	120	70	814	52
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	290	38	0	254	25	45	293	32	23	263	17
Total Analysis Volume [veh/h]	83	1161	154	0	1017	100	182	1172	130	91	1053	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	44	44	44	44	44	44
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.16	0.36	0.37	0.21	0.22	0.36	0.32	0.09	0.19	0.30	0.30
s, saturation flow rate [veh/h]	508	1863	1769	3547	1731	510	3618	1504	477	1900	1842
c, Capacity [veh/h]	199	756	718	1439	703	202	1780	740	181	935	906
d1, Uniform Delay [s]	31.49	24.79	25.05	20.12	20.25	37.81	17.18	12.72	34.48	16.54	16.62
k, delay calibration	0.11	0.31	0.32	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.39	9.56	11.61	0.29	0.62	41.90	1.93	0.52	9.58	2.90	3.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.42	0.88	0.90	0.52	0.53	0.90	0.66	0.18	0.50	0.60	0.61
d, Delay for Lane Group [s/veh]	32.88	34.35	36.66	20.41	20.87	79.70	19.11	13.23	44.06	19.44	19.70
Lane Group LOS	C	C	D	C	C	E	B	B	D	B	B
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	1.69	14.51	14.53	5.71	5.81	6.38	8.97	1.50	2.34	8.46	8.37
50th-Percentile Queue Length [ft]	42.26	362.79	363.35	142.74	145.24	159.40	224.27	37.52	58.62	211.56	209.21
95th-Percentile Queue Length [veh]	3.04	20.76	20.79	9.63	9.76	10.52	13.88	2.70	4.22	13.23	13.11
95th-Percentile Queue Length [ft]	76.07	518.97	519.65	240.71	244.07	262.93	347.07	67.54	105.52	330.83	327.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.88	35.33	36.66	0.00	20.53	20.87	79.70	19.11	13.23	44.06	19.56	19.70
Movement LOS	C	D	D		C	C	E	B	B	D	B	B
d_A, Approach Delay [s/veh]	35.33			20.56			26.03			21.41		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	26.28											
Intersection LOS	C											
Intersection V/C	0.722											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	62.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.796

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	158	1098	276	330	1245	150	169	1308	90	80	1013	104
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	1098	276	330	1245	150	169	1308	90	80	1013	104
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	312	78	89	334	40	44	344	24	23	297	31
Total Analysis Volume [veh/h]	180	1248	314	355	1338	161	178	1374	95	94	1188	122
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	52	12	40	58	9	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.44	0.10	0.33	0.49	0.08	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.10	0.25	0.20	0.10	0.26	0.11	0.10	0.38	0.07	0.05	0.33	0.08
s, saturation flow rate [veh/h]	1810	5074	1563	3445	5074	1499	1810	3618	1458	1774	3618	1499
c, Capacity [veh/h]	187	1628	731	356	1628	663	187	1205	717	138	1154	478
d1, Uniform Delay [s]	53.60	36.72	21.30	53.81	37.60	20.95	53.53	40.04	16.61	53.93	40.88	30.30
k, delay calibration	0.25	0.50	0.50	0.11	0.50	0.50	0.24	0.21	0.11	0.11	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	37.72	3.51	1.84	21.37	4.81	0.87	35.05	67.92	0.08	5.80	25.99	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.96	0.77	0.43	1.00	0.82	0.24	0.95	1.14	0.13	0.68	1.03	0.26
d, Delay for Lane Group [s/veh]	91.32	40.23	23.14	75.18	42.41	21.82	88.58	107.96	16.69	59.73	66.87	30.90
Lane Group LOS	F	D	C	E	D	C	F	F	B	E	F	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	7.31	11.31	6.13	6.40	12.70	3.00	7.11	28.63	1.42	2.97	20.76	2.68
50th-Percentile Queue Length [ft]	182.86	282.82	153.30	160.07	317.54	74.97	177.74	715.81	35.55	74.16	519.09	66.99
95th-Percentile Queue Length [veh]	11.75	16.83	10.19	10.55	18.55	5.40	11.48	40.70	2.56	5.34	28.78	4.82
95th-Percentile Queue Length [ft]	293.75	420.72	254.83	263.82	463.66	134.95	287.06	1017.55	64.00	133.48	719.57	120.58



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	91.32	40.23	23.14	75.18	42.41	21.82	88.58	107.96	16.69	59.73	66.87	30.90
Movement LOS	F	D	C	E	D	C	F	F	B	E	F	C
d_A, Approach Delay [s/veh]	42.43			46.90			100.60			63.27		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	62.49											
Intersection LOS	E											
Intersection V/C	0.796											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	61.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	1005	390	788	1731
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	1005	390	788	1731
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	280	109	209	459
Total Analysis Volume [veh/h]	0	0	1119	434	836	1836
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.35	0.31	0.52	0.58
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	13.52	12.65	29.72	0.29
k, delay calibration	0.50	0.50	0.42	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	2.72	251.75	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.63	0.55	1.54	0.61
d, Delay for Lane Group [s/veh]	15.20	15.37	281.47	1.20
Lane Group LOS	B	B	F	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.43	5.69	48.92	0.38
50th-Percentile Queue Length [ft]	185.68	142.15	1222.92	9.60
95th-Percentile Queue Length [veh]	11.90	9.60	75.69	0.69
95th-Percentile Queue Length [ft]	297.42	239.91	1892.34	17.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	15.20	15.37	281.47	1.20
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		15.25		88.89	
Approach LOS	A		B		F	
d_I, Intersection Delay [s/veh]	61.82					
Intersection LOS	E					
Intersection V/C	0.874					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	122.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	110	1729	130	95	1169	80	120	380	143	100	450	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1729	130	95	1169	80	120	380	143	100	450	100
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	509	38	26	322	22	32	100	38	27	123	27
Total Analysis Volume [veh/h]	130	2037	153	105	1286	88	126	400	151	109	490	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	41	0	15	56	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	52	52	52	29	29	29	29	29	29
g / C, Green / Cycle	0.42	0.42	0.42	0.57	0.57	0.57	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.34	0.64	0.11	0.20	0.40	0.07	0.18	0.13	0.11	0.13	0.18	0.19
s, saturation flow rate [veh/h]	385	3192	1407	514	3192	1351	718	3192	1328	861	1676	1492
c, Capacity [veh/h]	120	1330	586	330	1824	772	182	1044	434	261	548	488
d1, Uniform Delay [s]	43.66	26.39	17.28	17.94	13.92	8.89	39.94	23.43	23.12	32.28	25.11	25.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	107.18	243.27	1.08	2.52	2.32	0.30	4.60	0.23	0.48	1.07	0.91	1.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.09	1.53	0.26	0.32	0.71	0.11	0.69	0.38	0.35	0.42	0.56	0.60
d, Delay for Lane Group [s/veh]	150.84	269.67	18.36	20.46	16.24	9.19	44.54	23.66	23.60	33.35	26.02	26.62
Lane Group LOS	F	F	B	C	B	A	D	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.22	58.30	2.19	1.14	9.05	0.80	3.03	3.23	2.44	2.19	5.43	5.21
50th-Percentile Queue Length [ft]	155.50	1457.41	54.77	28.50	226.36	20.11	75.71	80.81	61.03	54.71	135.64	130.18
95th-Percentile Queue Length [veh]	10.81	90.14	3.94	2.05	13.99	1.45	5.45	5.82	4.39	3.94	9.25	8.95
95th-Percentile Queue Length [ft]	270.17	2253.58	98.59	51.30	349.73	36.20	136.27	145.46	109.85	98.47	231.15	223.73

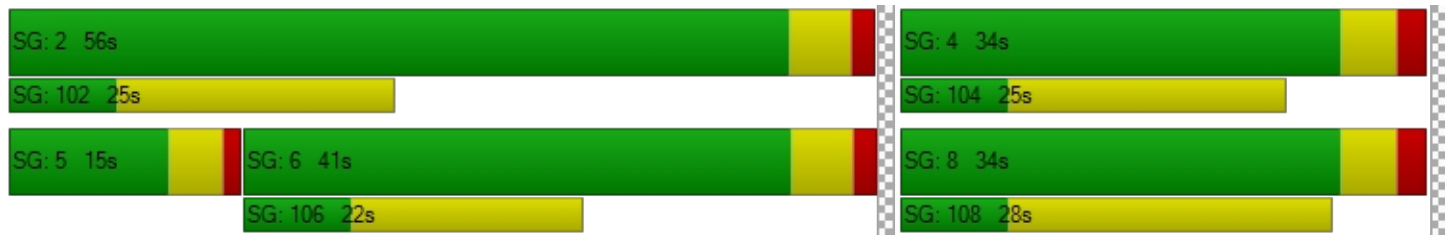


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	150.84	269.67	18.36	20.46	16.24	9.19	44.54	23.66	23.60	33.35	26.24	26.62
Movement LOS	F	F	B	C	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	246.44			16.12			27.53			27.40		
Approach LOS	F			B			C			C		
d_I, Intersection Delay [s/veh]	122.22											
Intersection LOS	F											
Intersection V/C	0.870											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	123	1102	110	80	1026	110	70	480	90	70	450	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	1102	110	80	1026	110	70	480	90	70	450	55
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	305	30	21	263	28	21	147	28	20	126	15
Total Analysis Volume [veh/h]	136	1219	122	82	1053	113	86	589	110	79	506	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.32	0.28	0.28	0.22	0.24	0.24	0.11	0.35	0.08	0.11	0.35
s, saturation flow rate [veh/h]	432	3192	1593	365	3192	1587	756	1676	1406	741	1642
c, Capacity [veh/h]	203	1583	790	170	1583	787	133	705	591	126	691
d1, Uniform Delay [s]	37.20	19.41	19.44	36.12	18.48	18.51	51.15	28.47	20.04	51.54	28.24
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.31	0.04	0.04	0.30
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.14	1.46	2.94	9.47	1.09	2.21	1.96	7.35	0.06	1.89	6.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

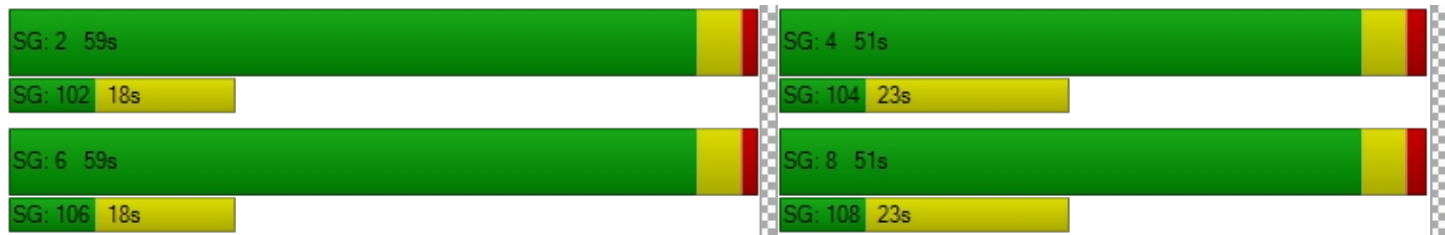
X, volume / capacity	0.67	0.56	0.57	0.48	0.49	0.49	0.65	0.84	0.19	0.63	0.82
d, Delay for Lane Group [s/veh]	53.33	20.88	22.38	45.59	19.57	20.73	53.11	35.82	20.09	53.44	34.93
Lane Group LOS	D	C	C	D	B	C	D	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	4.47	8.10	8.45	2.45	6.68	6.94	2.45	14.88	1.78	2.25	14.14
50th-Percentile Queue Length [ft]	111.80	202.50	211.32	61.25	167.07	173.49	61.30	371.99	44.39	56.31	353.46
95th-Percentile Queue Length [veh]	7.94	12.77	13.22	4.41	10.92	11.26	4.41	21.21	3.20	4.05	20.30
95th-Percentile Queue Length [ft]	198.50	319.18	330.52	110.26	273.06	281.49	110.34	530.15	79.90	101.36	507.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	53.33	21.28	22.38	45.59	19.87	20.73	53.11	35.82	20.09	53.44	34.93	34.93
Movement LOS	D	C	C	D	B	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	24.32			21.64			35.51			37.19		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.63											
Intersection LOS	C											
Intersection V/C	0.666											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	135.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.929

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	60	720	910	0	370	30	350	1035	140	50	1481	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	720	910	0	370	30	350	1035	140	50	1481	170
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	184	233	0	103	8	95	280	38	13	389	45
Total Analysis Volume [veh/h]	61	738	932	0	411	33	379	1122	152	53	1558	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	43	39	50	43	32	32	70	62	62	70	58	67
g / C, Green / Cycle	0.36	0.33	0.42	0.36	0.27	0.27	0.58	0.51	0.51	0.58	0.48	0.56
(v / s)_j Volume / Saturation Flow Rate	0.05	0.26	0.74	0.00	0.12	0.12	0.77	0.38	0.39	0.10	0.55	0.11
s, saturation flow rate [veh/h]	1138	2800	1252	750	1863	1812	493	1500	1824	552	2856	1581
c, Capacity [veh/h]	406	915	531	182	500	487	210	769	935	273	1373	896
d1, Uniform Delay [s]	26.88	36.95	35.35	0.00	36.50	36.54	45.59	22.96	23.27	18.03	31.18	12.70
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	1.74	346.87	0.00	0.63	0.66	380.75	6.29	5.64	1.58	70.27	0.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.81	1.75	0.00	0.45	0.45	1.81	0.74	0.75	0.19	1.13	0.20
d, Delay for Lane Group [s/veh]	27.05	38.69	382.22	0.00	37.13	37.20	426.34	29.25	28.91	19.61	101.45	13.20
Lane Group LOS	C	D	F	A	D	D	F	C	C	B	F	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.19	9.91	66.06	0.00	5.57	5.47	24.86	13.13	16.31	0.72	32.14	2.41
50th-Percentile Queue Length [ft]	29.80	247.81	1651.58	0.00	139.13	136.83	621.57	328.28	407.71	18.07	803.61	60.23
95th-Percentile Queue Length [veh]	2.15	15.08	105.48	0.00	9.43	9.31	44.28	19.07	22.93	1.30	45.48	4.34
95th-Percentile Queue Length [ft]	53.64	376.89	2636.91	0.00	235.86	232.75	1107.03	476.86	573.28	32.53	1136.98	108.41



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.05	38.69	382.22	0.00	37.16	37.20	426.34	29.08	28.91	19.61	101.45	13.20
Movement LOS	C	D	F	A	D	D	F	C	C	B	F	B
d_A, Approach Delay [s/veh]	223.24			37.16			120.15			90.20		
Approach LOS	F			D			F			F		
d_I, Intersection Delay [s/veh]	135.81											
Intersection LOS	F											
Intersection V/C	0.929											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.724

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	20	270	86	30	100	50	20	876	50	80	799	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	270	86	30	100	50	20	876	50	80	799	20
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	75	24	9	30	15	5	233	13	25	247	6
Total Analysis Volume [veh/h]	22	299	95	36	120	60	21	932	53	99	990	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	56	56	56	56
g / C, Green / Cycle	0.28	0.28	0.62	0.62	0.62	0.62
(v / s)_i Volume / Saturation Flow Rate	0.26	0.19	0.33	0.33	0.46	0.46
s, saturation flow rate [veh/h]	1585	1143	1557	1490	904	1514
c, Capacity [veh/h]	480	362	1010	926	612	941
d1, Uniform Delay [s]	31.78	27.28	9.28	9.60	13.85	11.89
k, delay calibration	0.28	0.12	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.60	1.80	1.83	2.19	6.08	5.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.87	0.60	0.51	0.53	0.68	0.74
d, Delay for Lane Group [s/veh]	43.37	29.08	11.10	11.79	19.93	17.11
Lane Group LOS	D	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	10.09	3.98	5.19	5.23	7.11	9.54
50th-Percentile Queue Length [ft]	252.23	99.41	129.84	130.83	177.68	238.41
95th-Percentile Queue Length [veh]	15.30	7.16	8.93	8.99	11.48	14.60
95th-Percentile Queue Length [ft]	382.46	178.95	223.28	224.63	286.99	365.02

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.37	43.37	43.37	29.08	29.08	29.08	11.10	11.43	11.79	19.93	18.02	17.11
Movement LOS	D	D	D	C	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	43.37			29.08			11.44			18.17		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	20.38											
Intersection LOS	C											
Intersection V/C	0.724											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	131.3
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.914

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗ ↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	783	571	0	75	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	783	571	0	75	48
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	225	164	0	26	17
Total Analysis Volume [veh/h]	0	901	657	0	106	68
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.91	0.16
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	131.26	14.79
Movement LOS		A	A		F	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	5.71	0.55
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	142.77	13.71
d_A, Approach Delay [s/veh]	0.00		0.00		85.75	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	8.61					
Intersection LOS	F					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	9	494	497	19	236	167
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	494	497	19	236	167
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	139	141	5	79	56
Total Analysis Volume [veh/h]	9	556	565	19	315	223
Pedestrian Volume [ped/h]	10		2		21	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.77	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.71	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.14		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	A					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	23.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.874

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	50	482	10	10	281	10	0	0	0	20	10	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	482	10	10	281	10	0	0	0	20	10	31
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	153	3	3	79	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	63	611	13	11	318	11	0	0	0	27	13	41
Pedestrian Volume [ped/h]	35			23			5			6		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	786	732	557	603
Degree of Utilization, x	0.87	0.46	0.00	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	11.01	2.48	0.00	0.46
95th-Percentile Queue Length [ft]	275.29	61.98	0.00	11.56
Approach Delay [s/veh]	30.26	12.12	0.00	9.90
Approach LOS	D	B	A	A
Intersection Delay [s/veh]	23.21			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	41	447	10	0	269	10	10	10	10	10	0	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	41	447	10	0	269	10	10	10	10	10	0	21
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	129	3	0	86	3	4	4	4	4	0	7
Total Analysis Volume [veh/h]	47	515	12	0	345	13	18	18	18	14	0	29
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	776	742	599	617
Degree of Utilization, x	0.74	0.48	0.09	0.07

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	6.74	2.65	0.30	0.22
95th-Percentile Queue Length [ft]	168.49	66.18	7.40	5.60
Approach Delay [s/veh]	19.63	12.28	9.61	9.27
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	16.11			
Intersection LOS	C			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	31	17	1	8	5	267	22	28	331	9
Total Analysis Volume [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	90	80	80	90	83	83
g / C, Green / Cycle	0.18	0.18	0.18	0.18	0.75	0.67	0.67	0.75	0.69	0.69
(v / s)_j Volume / Saturation Flow Rate	0.05	0.08	0.05	0.02	0.04	0.31	0.32	0.19	0.36	0.37
s, saturation flow rate [veh/h]	1333	1508	1241	1533	477	1870	1807	594	1870	1849
c, Capacity [veh/h]	242	265	162	269	375	1250	1208	461	1290	1275
d1, Uniform Delay [s]	46.91	44.39	53.36	41.72	5.83	9.59	9.62	5.83	9.09	9.11
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.47	0.62	0.08	0.26	1.26	1.32	1.25	1.56	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.46	0.41	0.13	0.05	0.47	0.47	0.24	0.53	0.53
d, Delay for Lane Group [s/veh]	47.12	44.86	53.98	41.80	6.08	10.85	10.95	7.08	10.64	10.70
Lane Group LOS	D	D	D	D	A	B	B	A	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.72	3.33	1.99	0.89	0.13	7.41	7.26	0.82	8.58	8.56
50th-Percentile Queue Length [ft]	43.11	83.14	49.69	22.15	3.33	185.16	181.48	20.55	214.56	213.90
95th-Percentile Queue Length [veh]	3.10	5.99	3.58	1.60	0.24	11.87	11.68	1.48	13.39	13.35
95th-Percentile Queue Length [ft]	77.60	149.66	89.45	39.88	5.99	296.74	291.95	36.98	334.67	333.82



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.12	44.86	44.86	53.98	41.80	41.80	6.08	10.89	10.95	7.08	10.67	10.70
Movement LOS	D	D	D	D	D	D	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	45.63			49.80			10.82			10.40		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	14.17											
Intersection LOS	B											
Intersection V/C	0.451											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	256.86	486.31	525.51	400.70
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.190	2.024	2.909	2.941
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.867	1.728	2.529	2.774
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	35.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	28	102	0	674	727	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	102	0	674	727	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	26	0	169	182	0
Total Analysis Volume [veh/h]	28	102	0	674	727	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.19	0.25	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	35.08	16.85	0.00	0.00	0.00	0.00
Movement LOS	E	C		A	A	
95th-Percentile Queue Length [veh]	0.67	0.98	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	16.84	24.60	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.78		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.76					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	2.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.397

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	2	361	0	0	368	3
Total Analysis Volume [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	0	0		111	106	106	111	104	104
g / C, Green / Cycle	0.00	0.00		0.92	0.88	0.88	0.92	0.87	0.87
(v / s)_j Volume / Saturation Flow Rate	0.00	0.00		0.02	0.39	0.39	0.00	0.40	0.40
s, saturation flow rate [veh/h]	1781	1870		412	1870	1870	403	1870	1864
c, Capacity [veh/h]	1	1		436	1653	1653	431	1628	1623
d1, Uniform Delay [s]	0.00	0.00		0.91	1.31	1.31	0.00	1.67	1.67
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00		0.08	0.84	0.84	0.00	0.92	0.93
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.00	0.00		0.02	0.44	0.44	0.00	0.46	0.46
d, Delay for Lane Group [s/veh]	0.00	0.00		0.98	2.15	2.15	0.00	2.59	2.59
Lane Group LOS	A	A		A	A	A	A	A	A
Critical Lane Group	No	No		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.00	0.00		0.01	1.52	1.52	0.00	2.16	2.16
50th-Percentile Queue Length [ft]	0.00	0.00		0.23	38.01	38.01	0.00	53.95	53.93
95th-Percentile Queue Length [veh]	0.00	0.00		0.02	2.74	2.74	0.00	3.88	3.88
95th-Percentile Queue Length [ft]	0.00	0.00		0.42	68.41	68.41	0.00	97.10	97.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.98	2.15	2.15	0.00	2.59	2.59
Movement LOS	A	A	A				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			2.15			2.59		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.37											
Intersection LOS	A											
Intersection V/C	0.397											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	341.31	206.06	386.92	341.31
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	1.954	1.466	2.883	2.884
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.758	2.781
Bicycle LOS	A	D	C	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	729	627	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	729	627	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	182	157	1
Total Analysis Volume [veh/h]	5	2	1	729	627	3
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.79	12.83	8.85	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.10	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	2.47	0.33	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.23		0.01		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.451

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔			↔			↔			↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	0	31	17	1	8	5	267	22	28	331	9
Total Analysis Volume [veh/h]	63	0	123	67	3	32	19	1067	89	112	1325	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	90	80	80	90	83	83
g / C, Green / Cycle	0.18	0.18	0.18	0.18	0.75	0.67	0.67	0.75	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.05	0.08	0.05	0.02	0.04	0.31	0.32	0.19	0.36	0.37
s, saturation flow rate [veh/h]	1333	1508	1241	1533	477	1870	1807	594	1870	1849
c, Capacity [veh/h]	242	265	162	269	375	1250	1208	461	1290	1275
d1, Uniform Delay [s]	46.91	44.39	53.36	41.72	5.83	9.59	9.62	5.83	9.09	9.11
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.47	0.62	0.08	0.26	1.26	1.32	1.25	1.56	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.46	0.41	0.13	0.05	0.47	0.47	0.24	0.53	0.53
d, Delay for Lane Group [s/veh]	47.12	44.86	53.98	41.80	6.08	10.85	10.95	7.08	10.64	10.70
Lane Group LOS	D	D	D	D	A	B	B	A	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.72	3.33	1.99	0.89	0.13	7.41	7.26	0.82	8.58	8.56
50th-Percentile Queue Length [ft/ln]	43.11	83.14	49.69	22.15	3.33	185.16	181.48	20.55	214.56	213.90
95th-Percentile Queue Length [veh/ln]	3.10	5.99	3.58	1.60	0.24	11.87	11.68	1.48	13.39	13.35
95th-Percentile Queue Length [ft/ln]	77.60	149.66	89.45	39.88	5.99	296.74	291.95	36.98	334.67	333.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	47.12	44.86	44.86	53.98	41.80	41.80	6.08	10.89	10.95	7.08	10.67	10.70
Movement LOS	D	D	D	D	D	D	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	45.63			49.80			10.82			10.40		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	14.17											
Intersection LOS	B											
Intersection V/C	0.451											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	256.86	486.31	525.51	400.70
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.190	2.024	2.909	2.941
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.867	1.728	2.529	2.774
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	35.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.190

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	28	102	0	674	727	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	102	0	674	727	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	26	0	169	182	0
Total Analysis Volume [veh/h]	28	102	0	674	727	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.19	0.25	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	35.08	16.85	0.00	0.00	0.00	0.00
Movement LOS	E	C		A	A	
95th-Percentile Queue Length [veh/ln]	0.67	0.98	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	16.84	24.60	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.78		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.76					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	2	361	0	0	368	3
Total Analysis Volume [veh/h]	0	0	0	0	0	0	8	1444	0	0	1470	11
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	8	8		103	98	98	103	97	97
g / C, Green / Cycle	0.06	0.06		0.86	0.82	0.82	0.86	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.00	0.00		0.02	0.39	0.39	0.00	0.40	0.40
s, saturation flow rate [veh/h]	1781	1870		416	1870	1870	406	1870	1864
c, Capacity [veh/h]	116	122		398	1532	1532	393	1507	1502
d1, Uniform Delay [s]	0.00	0.00		2.33	3.18	3.18	0.00	3.74	3.75
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.00	0.00		0.09	1.04	1.04	0.00	1.15	1.16
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.00	0.00		0.02	0.47	0.47	0.00	0.49	0.49
d, Delay for Lane Group [s/veh]	0.00	0.00		2.43	4.23	4.23	0.00	4.90	4.91
Lane Group LOS	A	A		A	A	A	A	A	A
Critical Lane Group	No	No		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.00	0.00		0.02	4.11	4.11	0.00	4.87	4.87
50th-Percentile Queue Length [ft/ln]	0.00	0.00		0.62	102.85	102.85	0.00	121.78	121.70
95th-Percentile Queue Length [veh/ln]	0.00	0.00		0.04	7.41	7.41	0.00	8.49	8.49
95th-Percentile Queue Length [ft/ln]	0.00	0.00		1.12	185.13	185.13	0.00	212.27	212.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	2.43	4.23	4.23	0.00	4.90	4.91
Movement LOS	A	A	A				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			4.22			4.90		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.56											
Intersection LOS	A											
Intersection V/C	0.398											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	341.31	207.37	386.92	341.31
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	1.954	1.465	2.883	2.884
Crosswalk LOS	A	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.560	4.132	2.758	2.781
Bicycle LOS	A	D	C	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	729	627	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	729	627	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	182	157	1
Total Analysis Volume [veh/h]	5	2	1	729	627	3
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.79	12.83	8.85	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.47	0.33	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.23		0.01		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	D					



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** San Vicente Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	82	1	82	114	1	114
	↶↷ Left-Through		0			0	
	→ Through	160	1	160	350	1	350
	↷ Through-Right		0			0	
	↷ Right	122	1	50	158	1	86
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	280	1	280	210	1	210
	↷↶ Left-Through		0			0	
	→ Through	250	1	250	260	1	260
	↷ Through-Right		0			0	
	↷ Right	150	1	115	120	1	75
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	70	1	70	90	1	90
	↶↷ Left-Through		0			0	
	→ Through	852	2	426	684	2	342
	↷ Through-Right		0			0	
	↷ Right	93	1	52	73	1	16
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	144	1	144	144	1	144
	↶↷ Left-Through		0			0	
	→ Through	793	2	397	793	2	397
	↷ Through-Right		0			0	
	↷ Right	160	1	20	270	1	165
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 440			<i>North-South:</i> 610
				<i>East-West:</i> 570			<i>East-West:</i> 487
				<b>SUM:</b> 1010			<b>SUM:</b> 1097
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.735			0.798
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.635</b>			<b>0.698</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 2	<i>WB--</i> 2	2	<i>EB--</i> 2	<i>WB--</i> 2	2
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	10	0	10	30	0	30
	Left-Through		1			1	
	Through	90	0	100	100	0	130
	Through-Right		0			0	
	Right	10	1	0	30	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	180	0	180	110	0	110
	Left-Through		1			1	
	Through	80	0	260	90	0	200
	Through-Right		0			0	
	Right	20	1	5	40	1	20
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	30	1	30	40	1	40
	Left-Through		0			0	
	Through	1076	1	543	1254	1	637
	Through-Right		1			1	
	Right	10	0	10	20	0	20
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	1375	1	723	1330	1	710
	Through-Right		1			1	
	Right	70	0	70	90	0	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 280			<i>North-South:</i> 240
				<i>East-West:</i> 753			<i>East-West:</i> 750
				<i>SUM:</i> 1033			<i>SUM:</i> 990
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.689			0.660
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.589			0.560
<b>LEVEL OF SERVICE (LOS):</b>				A			A



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	160	1	160	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	100	1	100	90	1	90
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1146	1	633	1434	1	767
	↵↔ Through-Right		1			1	
	↵ Right	120	0	120	100	0	100
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	50	1	50	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1365	2	683	1360	2	680
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 160			<i>North-South:</i> 240
				<i>East-West:</i> 683			<i>East-West:</i> 847
				<i>SUM:</i> 843			<i>SUM:</i> 1087
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.562			0.725
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.462</b>			<b>0.625</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2 0 0 0 2 0			2 0 0 0 2 0
		<b>NB--</b> 2	<b>SB--</b> 0		<b>NB--</b> 2	<b>SB--</b> 0	
		<b>EB--</b> 0	<b>WB--</b> 0		<b>EB--</b> 0	<b>WB--</b> 0	
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	115	0	115	94	0	94
	Left-Through		0			0	
	Through	300	0	465	400	0	574
	Through-Right		0			0	
	Right	50	0	0	80	0	0
	Left-Through-Right			1			1
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	30	0	30	30	0	30
	Left-Through		0			0	
	Through	210	0	260	280	0	340
	Through-Right		0			0	
	Right	20	0	0	30	0	0
	Left-Through-Right			1			1
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	20	1	20
	Left-Through		0			0	
	Through	773	1	431	1084	1	584
	Through-Right		1			1	
	Right	89	0	89	84	0	84
	Left-Through-Right			0			0
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	70	1	70	40	1	40
	Left-Through		0			0	
	Through	1324	1	687	1081	1	561
	Through-Right		1			1	
	Right	50	0	50	40	0	40
	Left-Through-Right			0			0
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 495 <i>East-West:</i> 707 <i>SUM:</i> 1202			<i>North-South:</i> 604 <i>East-West:</i> 624 <i>SUM:</i> 1228
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.801			0.819
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.701</b>			<b>0.719</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Broadway

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	70	0	70
	Left-Through		0			0	
	Through	415	0	535	504	0	634
	Through-Right		0			0	
	Right	50	0	0	60	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	20	0	20	20	0	20
	Left-Through		0			0	
	Through	359	0	399	394	0	434
	Through-Right		0			0	
	Right	20	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	162	0	282	335	0	445
	Through-Right		1			1	
	Right	120	0	0	110	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	30	1	30	30	1	30
	Left-Through		0			0	
	Through	194	1	194	133	1	133
	Through-Right		0			0	
	Right	20	1	20	30	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		555	<i>North-South:</i>		654
		<i>East-West:</i>		312	<i>East-West:</i>		475
		<i>SUM:</i>		867	<i>SUM:</i>		1129
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.578			0.753
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.478</b>			<b>0.653</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	559	2	307	774	2	426
	↵↔ Left-Through		0			0	
	→ Through	10	0	60	10	0	120
	↵↔ Through-Right		1			1	
	↵ Right	50	0	0	110	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1026	1	518	1276	1	643
	↵↔ Through-Right		1			1	
	↵ Right	10	0	10	10	0	10
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	10	1	10	10	1	10
	↵↔ Left-Through		0			0	
	→ Through	1521	2	761	1420	2	710
	↵↔ Through-Right		0			0	
	↵ Right	705	1	398	694	1	268
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 307			<i>North-South:</i> 426
				<i>East-West:</i> 801			<i>East-West:</i> 780
				<i>SUM:</i> 1108			<i>SUM:</i> 1206
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.739			0.804
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.639</b>			<b>0.704</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	775	1	483	505	1	323
	↵↵ Left-Through		0			0	
	→ Through	0	0	483	0	0	323
	↵↵↵ Through-Right		0			0	
	↵ Right	190	0	0	140	0	0
	↵↵↵ Left-Through-Right			1		1	
	↵↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↵ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↵↵ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↵↵ Left-Through-Right			1		1	
	↵↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↵ Left-Through		0			0	
	→ Through	1241	3	414	1431	3	477
	↵↵↵ Through-Right		0			0	
	↵ Right	313	1	0	628	1	305
	↵↵↵ Left-Through-Right			0		0	
	↵↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	140	1	140	50	1	50
	↵↵ Left-Through		0			0	
	→ Through	1450	2	483	1608	2	536
	↵↵↵ Through-Right		1			1	
	↵ Right	0	0	0	0	0	0
	↵↵↵ Left-Through-Right			0		0	
	↵↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 483			<i>North-South:</i> 323
				<i>East-West:</i> 554			<i>East-West:</i> 536
				<i>SUM:</i> 1037			<i>SUM:</i> 859
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.728			0.603
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.628</b>			<b>0.503</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 2	<b>SB--</b> 2	2	<b>NB--</b> 2	<b>SB--</b> 2	2
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 0	0	<b>EB--</b> 3	<b>WB--</b> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	430	1	430	420	1	420
	Left-Through		0			0	
	Through	520	1	520	230	1	230
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	353	1	353	678	1	678
	Through-Right		0			0	
	Right	80	1	80	70	1	70
	Left-Through-Right		0			0	
<b>EASTBOUND</b>	Left	635	1	635	325	1	325
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	340	1	0	280	1	0
	Left-Through-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 783			<i>North-South:</i> 1098
				<i>East-West:</i> 635			<i>East-West:</i> 325
				<i>SUM:</i> 1418			<i>SUM:</i> 1423
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.995			0.999
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.895			0.899
<b>LEVEL OF SERVICE (LOS):</b>				D			D



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Texas Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	20	0	20
	Left-Through		1		1	1	
	Through	866	0	578	876	0	503
	Through-Right		1		1	1	
	Right	10	0	578	50	0	503
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	20	0	20	80	0	80
	Left-Through		1		1	1	
	Through	780	0	435	799	0	570
	Through-Right		1		1	1	
	Right	10	0	435	20	0	570
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	0	20	20	0	20
	Left-Through		0			0	
	Through	90	0	193	270	0	376
	Through-Right		0			0	
	Right	83	0	0	86	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	70	0	70	30	0	30
	Left-Through		0			0	
	Through	100	0	220	100	0	180
	Through-Right		0			0	
	Right	50	0	0	50	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 598			<i>North-South:</i> 590
				<i>East-West:</i> 263			<i>East-West:</i> 406
				<i>SUM:</i> 861			<i>SUM:</i> 996
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.574			0.664
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.474</b>			<b>0.564</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				4			4
		0		0	0		0
		0		0	0		0
		2		2	2		2
		0		0	0		0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	220	1	220	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	620	1	373	710	1	403
	↗ Through-Right		1			1	
	↘ Right	126	0	126	96	0	96
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	640	1	360	650	1	355
	↗ Through-Right		1			1	
	↘ Right	80	0	80	60	0	60
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	1256	2	628	784	2	392
	↗ Through-Right		0			0	
	↘ Right	90	1	0	120	1	45
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	140	1	140	169	1	169
	↵↔ Left-Through		0			0	
	→ Through	1375	2	688	1260	2	630
	↗ Through-Right		0			0	
	↘ Right	80	1	25	100	1	65
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 580 <i>East-West:</i> 768 <i>SUM:</i> 1348			<i>North-South:</i> 505 <i>East-West:</i> 730 <i>SUM:</i> 1235
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.980			0.898
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.880</b>			<b>0.798</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	120	1	120	168	1	168
	↵↵ Left-Through		0			0	
	↵↵ Through	875	2	438	1084	2	542
	↵↵ Through-Right		0			0	
	↵↵ Right	70	1	70	120	1	120
	↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↵ Left	70	1	70	70	1	70
	↵↵ Left-Through		0			0	
	↵↵ Through	862	1	452	814	1	433
	↵↵ Through-Right		1			1	
	↵↵ Right	42	0	42	52	0	52
	↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵↵ Left	51	1	51	73	1	73
	↵↵ Left-Through		0			0	
	↵↵ Through	720	1	451	1025	1	581
	↵↵ Through-Right		1			1	
	↵↵ Right	182	0	182	136	0	136
	↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵↵ Left	0	0	0	0	0	0
	↵↵ Left-Through		0			0	
	↵↵ Through	1041	2	387	912	2	334
	↵↵ Through-Right		1			1	
	↵↵ Right	120	0	120	90	0	90
	↵↵ Left-Through-Right		0			0	
	↵↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 572			<i>North-South:</i> 612
				<i>East-West:</i> 451			<i>East-West:</i> 581
				<i>SUM:</i> 1023			<i>SUM:</i> 1193
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.682			0.795
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.582</b>			<b>0.695</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	1	70	60	1	60
	Left-Through		0			0	
	Through	1011	2	354	1216	2	425
	Through-Right		1			1	
	Right	50	0	50	60	0	60
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	1040	1	557	907	1	485
	Through-Right		1			1	
	Right	74	0	74	63	0	63
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	42	1	42	115	1	115
	Left-Through		0			0	
	Through	170	0	280	220	0	380
	Through-Right		1			1	
	Right	110	0	0	160	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	150	1	150	90	1	90
	Left-Through		0			0	
	Through	210	1	210	80	1	80
	Through-Right		0			0	
	Right	10	1	10	10	1	10
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 627			<i>North-South:</i> 545
				<i>East-West:</i> 430			<i>East-West:</i> 470
				<i>SUM:</i> 1057			<i>SUM:</i> 1015
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.705			0.677
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.605</b>			<b>0.577</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 1	1	NB-- 3	SB-- 1	1
		EB-- 3	WB-- 3	3	EB-- 3	WB-- 3	3
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	300	1	300	169	1	169
	↵↔ Left-Through		0			0	
	→ Through	1240	2	620	1308	2	654
	↘ Through-Right		0			0	
	↘ Right	240	1	124	90	1	0
	↵↔↘ Left-Through-Right		0			0	
↵↘ Left-Right		0			0		
<b>SOUTHBOUND</b>	↵ Left	160	1	160	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1026	2	513	1013	2	507
	↘ Through-Right		0			0	
	↘ Right	144	1	0	104	1	0
	↵↔↘ Left-Through-Right		0			0	
↵↘ Left-Right		0			0		
<b>EASTBOUND</b>	↵ Left	162	1	162	158	1	158
	↵↔ Left-Through		0			0	
	→ Through	905	3	302	1098	3	366
	↘ Through-Right		0			0	
	↘ Right	85	1	0	276	1	107
	↵↔↘ Left-Through-Right		0			0	
↵↘ Left-Right		0			0		
<b>WESTBOUND</b>	↵ Left	210	2	116	330	2	182
	↵↔ Left-Through		0			0	
	→ Through	1247	3	416	1245	3	415
	↘ Through-Right		0			0	
	↘ Right	130	1	0	150	1	70
	↵↔↘ Left-Through-Right		0			0	
↵↘ Left-Right		0			0		
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 813			<i>North-South:</i> 734
				<i>East-West:</i> 578			<i>East-West:</i> 573
				<i>SUM:</i> 1391			<i>SUM:</i> 1307
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.012			0.951
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.912</b>			<b>0.851</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>E</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ocean Park Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	830	1	830	350	1	350
	↵↵ Left-Through		0			0	
	→ Through	1626	1	863	1035	1	588
	↵↵↵ Through-Right		1			1	
	↵ Right	100	0	100	140	0	140
	↵↵↵ Left-Through-Right		0			0	
	↵↵↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↵ Left	30	1	30	50	1	50
	↵↵ Left-Through		0			0	
	→ Through	723	2	362	1481	2	741
	↵↵ Through-Right		0			0	
	↵ Right	290	1	280	170	1	140
	↵↵↵ Left-Through-Right		0			0	
	↵↵↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	60	1	60
	↵↵ Left-Through		0			0	
	→ Through	330	2	165	720	2	360
	↵↵ Through-Right		0			0	
	↵ Right	300	1	0	910	1	735
	↵↵↵ Left-Through-Right		0			0	
	↵↵↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	60	1	60	0	1	0
	↵↵ Left-Through		0			0	
	→ Through	470	1	265	370	1	200
	↵↵ Through-Right		1			1	
	↵ Right	60	0	60	30	0	30
	↵↵↵ Left-Through-Right		0			0	
	↵↵↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1192			<i>North-South:</i> 1091
				<i>East-West:</i> 285			<i>East-West:</i> 735
				<i>SUM:</i> 1477			<i>SUM:</i> 1826
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.074			1.328
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.974</b>			<b>1.228</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>E</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 EB On-Ramp

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 2	<i>SB--</i> 0	0	<i>NB--</i> 2	<i>SB--</i> 0	0
		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	2006	2	1003	1005	2	503
	Through-Right		0			0	
	Right	870	1	870	390	1	390
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	711	1	711	788	1	788
	Left-Through		0			0	
	Through	1613	2	807	1731	2	866
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		1714	<i>North-South:</i>		1291
		<i>East-West:</i>		0	<i>East-West:</i>		0
		<i>SUM:</i>		1714	<i>SUM:</i>		1291
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.143			0.861
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				1.043			0.761
<b>LEVEL OF SERVICE (LOS):</b>				F			C



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	180	1	180	120	1	120
	↵↔ Left-Through		0			0	
	→ Through	370	2	185	380	2	190
	↗ Through-Right		0			0	
	↘ Right	93	1	50	143	1	96
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	90	1	90	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	310	1	220	450	1	275
	↗ Through-Right		1			1	
	↘ Right	130	0	130	100	0	100
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	60	1	60	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	1732	2	866	1729	2	865
	↗ Through-Right		0			0	
	↘ Right	60	1	0	130	1	0
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	87	1	87	95	1	95
	↵↔ Left-Through		0			0	
	→ Through	1536	2	768	1169	2	585
	↗ Through-Right		0			0	
	↘ Right	60	1	15	80	1	30
	↗↘ Left-Through-Right		0			0	
	↗↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 400			<i>North-South:</i> 395
				<i>East-West:</i> 953			<i>East-West:</i> 960
				<i>SUM:</i> 1353			<i>SUM:</i> 1355
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.949			0.951
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.849</b>			<b>0.851</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Interim Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	520	1	520	480	1	480
	↵↔ Through-Right		0			0	
	↵ Right	90	1	40	90	1	50
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	120	1	120	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	480	0	567	450	0	505
	↵↔ Through-Right		1			1	
	↵ Right	87	0	0	55	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	83	1	83	123	1	123
	↵↔ Left-Through		0			0	
	→ Through	997	2	356	1102	2	404
	↵↔ Through-Right		1			1	
	↵ Right	70	0	70	110	0	110
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	100	1	100	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1263	2	444	1026	2	379
	↵↔ Through-Right		1			1	
	↵ Right	70	0	70	110	0	110
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 677			<i>North-South:</i> 575
				<i>East-West:</i> 527			<i>East-West:</i> 502
				<i>SUM:</i> 1204			<i>SUM:</i> 1077
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.803			0.718
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.703</b>			<b>0.618</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>B</b>

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**FUTURE (2042) NO PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.903

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	60	370	30	70	50	190	400	60	20	390	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	60	370	30	70	50	190	400	60	20	390	110
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	16	100	8	19	13	53	112	17	5	106	30
Total Analysis Volume [veh/h]	43	65	402	32	75	54	213	449	67	22	424	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	58	27	27	31	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.34	0.56	0.56	0.03	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.50	0.26	0.33	0.04	0.12	0.24	0.04	0.01	0.22	0.10
s, saturation flow rate [veh/h]	215	1540	327	1528	1810	1900	1499	1643	1900	1183
c, Capacity [veh/h]	121	993	151	463	618	1067	842	54	481	299
d1, Uniform Delay [s]	29.79	7.68	26.00	22.66	22.10	11.32	9.05	42.66	32.33	27.95
k, delay calibration	0.50	0.24	0.41	0.04	0.50	0.50	0.50	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	56.91	0.60	20.57	0.04	1.52	1.22	0.18	1.82	6.76	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

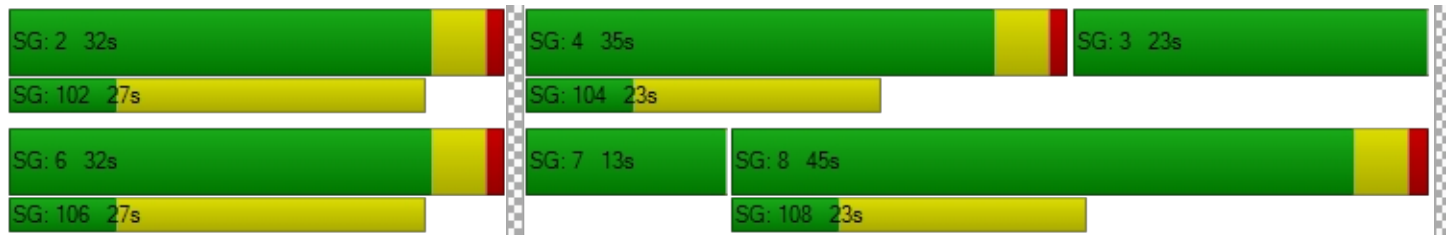
X, volume / capacity	0.89	0.40	0.71	0.12	0.34	0.42	0.08	0.41	0.88	0.40
d, Delay for Lane Group [s/veh]	86.70	8.28	46.58	22.70	23.62	12.53	9.23	44.48	39.08	28.27
Lane Group LOS	F	A	D	C	C	B	A	D	D	C
Critical Lane Group	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.32	3.55	2.48	0.81	3.54	5.12	0.61	0.50	9.52	2.14
50th-Percentile Queue Length [ft]	108.12	88.75	62.10	20.14	88.56	127.92	15.26	12.55	238.03	53.39
95th-Percentile Queue Length [veh]	7.74	6.39	4.47	1.45	6.38	8.83	1.10	0.90	14.58	3.84
95th-Percentile Queue Length [ft]	193.39	159.76	111.79	36.25	159.40	220.66	27.47	22.60	364.54	96.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	86.70	86.70	8.28	46.58	46.58	22.70	23.62	12.53	9.23	44.48	39.08	28.27
Movement LOS	F	F	A	D	D	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	24.89			38.57			15.47			37.00		
Approach LOS	C			D			B			D		
d_I, Intersection Delay [s/veh]	26.00											
Intersection LOS	C											
Intersection V/C	0.903											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	610	150	200	640	30	130	310	260	70	350	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	610	150	200	640	30	130	310	260	70	350	50
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	161	40	51	163	8	35	83	70	19	94	13
Total Analysis Volume [veh/h]	21	643	158	204	653	31	139	332	278	75	377	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	45	45	45	36	36	36	24	24	24
g / C, Green / Cycle	0.37	0.37	0.37	0.50	0.50	0.50	0.40	0.40	0.40	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.03	0.18	0.11	0.20	0.18	0.02	0.12	0.17	0.18	0.07	0.12	0.12
s, saturation flow rate [veh/h]	775	3618	1489	1029	3618	1483	1194	1900	1544	1047	1900	1796
c, Capacity [veh/h]	265	1324	545	531	1818	745	492	751	610	198	510	482
d1, Uniform Delay [s]	26.79	22.02	20.25	13.62	13.60	11.38	18.40	19.95	20.08	38.22	27.24	27.32
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.13	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.58	1.28	1.34	2.09	0.55	0.10	0.37	0.15	0.20	0.45	0.21	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

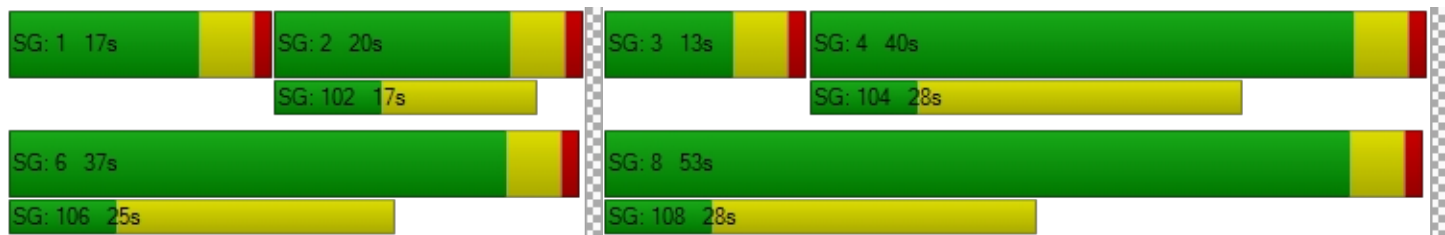
X, volume / capacity	0.08	0.49	0.29	0.38	0.36	0.04	0.28	0.44	0.46	0.38	0.43	0.44
d, Delay for Lane Group [s/veh]	27.37	23.29	21.60	15.72	14.16	11.49	18.77	20.10	20.28	38.67	27.45	27.55
Lane Group LOS	C	C	C	B	B	B	B	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.39	5.31	2.50	2.45	3.86	0.32	1.89	4.96	4.18	1.57	3.79	3.68
50th-Percentile Queue Length [ft]	9.79	132.72	62.42	61.35	96.42	7.93	47.34	123.91	104.60	39.17	94.79	91.94
95th-Percentile Queue Length [veh]	0.70	9.09	4.49	4.42	6.94	0.57	3.41	8.61	7.53	2.82	6.82	6.62
95th-Percentile Queue Length [ft]	17.61	227.18	112.36	110.44	173.55	14.27	85.21	215.19	188.29	70.50	170.62	165.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.37	23.29	21.60	15.72	14.16	11.49	18.77	20.10	20.28	38.67	27.49	27.55
Movement LOS	C	C	C	B	B	B	B	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.07			14.42			19.92			29.15		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	20.72											
Intersection LOS	C											
Intersection V/C	0.427											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	70	60	30	80	30	80	700	70	10	710	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	70	60	30	80	30	80	700	70	10	710	10
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	21	18	10	25	10	21	183	18	3	190	3
Total Analysis Volume [veh/h]	12	83	71	38	101	38	83	730	73	11	760	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	52	52	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.65	0.58	0.58	0.65	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.05	0.05	0.03	0.08	0.09	0.21	0.22	0.01	0.20	0.20
s, saturation flow rate [veh/h]	1821	1486	1253	1691	876	1900	1784	773	1900	1884
c, Capacity [veh/h]	503	374	321	425	595	1093	1027	531	1000	992
d1, Uniform Delay [s]	26.53	26.47	30.27	27.46	6.74	10.34	10.43	6.43	12.67	12.68
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.07	0.09	0.06	0.16	0.04	0.98	1.09	0.07	1.13	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

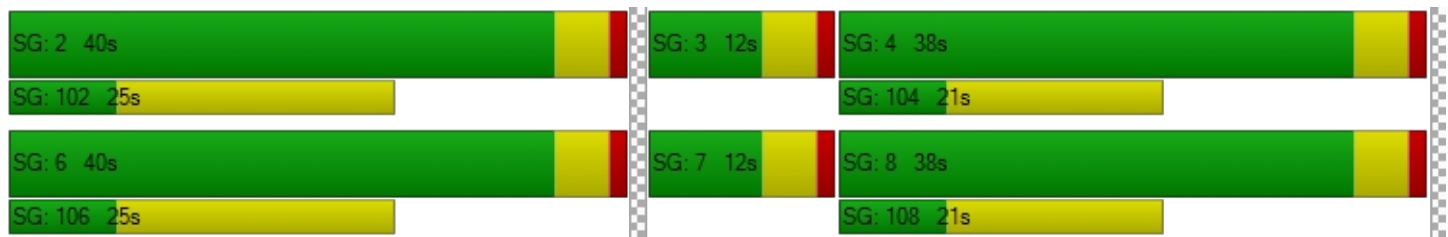
X, volume / capacity	0.19	0.19	0.12	0.33	0.14	0.37	0.38	0.02	0.39	0.39
d, Delay for Lane Group [s/veh]	26.60	26.56	30.33	27.63	6.78	11.31	11.52	6.51	13.80	13.83
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.57	1.17	0.67	2.38	0.53	4.31	4.23	0.08	4.66	4.64
50th-Percentile Queue Length [ft]	39.22	29.30	16.86	59.53	13.13	107.72	105.79	1.91	116.41	116.02
95th-Percentile Queue Length [veh]	2.82	2.11	1.21	4.29	0.95	7.71	7.61	0.14	8.20	8.17
95th-Percentile Queue Length [ft]	70.60	52.75	30.35	107.16	23.64	192.82	190.13	3.45	204.88	204.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.60	26.60	26.56	30.33	27.63	27.63	6.78	11.40	11.52	6.51	13.81	13.83
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.58			28.21			10.98			13.71		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.85											
Intersection LOS	B											
Intersection V/C	0.307											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.483

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	310	70	120	300	40	110	760	170	90	620	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	310	70	120	300	40	110	760	170	90	620	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	90	20	34	84	11	29	198	44	25	169	3
Total Analysis Volume [veh/h]	12	359	81	135	336	45	115	793	177	98	678	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.34	0.34	0.34	0.56	0.44	0.44	0.56	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.01	0.12	0.13	0.11	0.18	0.03	0.12	0.26	0.27	0.12	0.18	0.18
s, saturation flow rate [veh/h]	1028	1900	1699	1226	1900	1502	956	1900	1736	808	1900	1886
c, Capacity [veh/h]	129	401	359	425	642	508	558	830	758	446	828	822
d1, Uniform Delay [s]	41.33	31.81	32.10	22.01	23.99	20.36	10.17	19.40	19.59	11.71	17.55	17.56
k, delay calibration	0.04	0.04	0.04	0.10	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.46	0.60	0.39	0.25	0.03	0.25	3.23	3.77	1.13	1.55	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

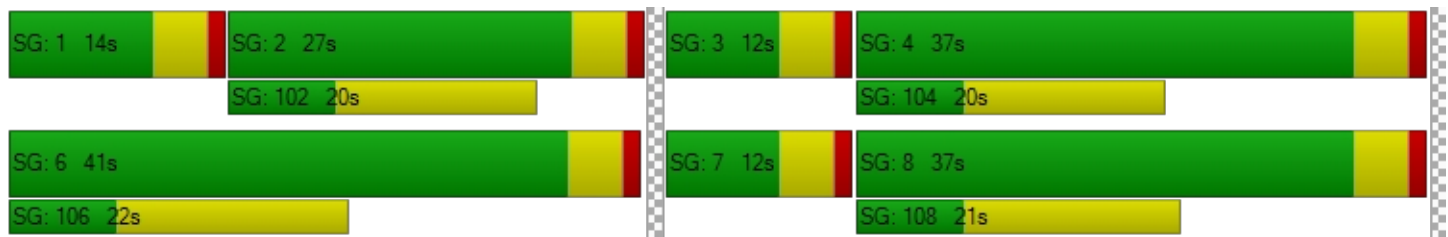
X, volume / capacity	0.09	0.56	0.60	0.32	0.52	0.09	0.21	0.60	0.62	0.22	0.42	0.42
d, Delay for Lane Group [s/veh]	41.44	32.26	32.70	22.40	24.23	20.38	10.42	22.63	23.36	12.84	19.10	19.12
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	4.35	4.20	2.04	5.62	0.64	1.04	8.36	8.01	0.98	5.11	5.09
50th-Percentile Queue Length [ft]	6.45	108.71	105.00	50.98	140.53	15.94	25.95	209.01	200.28	24.60	127.71	127.14
95th-Percentile Queue Length [veh]	0.46	7.77	7.56	3.67	9.51	1.15	1.87	13.10	12.65	1.77	8.81	8.78
95th-Percentile Queue Length [ft]	11.61	194.21	189.01	91.77	237.74	28.70	46.72	327.55	316.33	44.28	220.37	219.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.44	32.43	32.70	22.40	24.23	20.38	10.42	22.90	23.36	12.84	19.11	19.12
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.71			23.42			21.65			18.33		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.81											
Intersection LOS	C											
Intersection V/C	0.483											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	70	300	100	110	250	50	110	940	140	30	740	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	300	100	110	250	50	110	940	140	30	740	60
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	76	25	30	69	14	29	250	37	8	204	17
Total Analysis Volume [veh/h]	71	304	101	122	277	55	117	1000	149	33	815	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	7	34	34	7	46	46	34	34	34
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.51	0.51	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.07	0.16	0.07	0.07	0.15	0.04	0.06	0.31	0.32	0.07	0.23	0.24
s, saturation flow rate [veh/h]	1065	1900	1432	1810	1900	1486	1810	1900	1755	497	1900	1824
c, Capacity [veh/h]	209	473	357	149	727	569	149	979	904	145	725	697
d1, Uniform Delay [s]	37.29	30.22	27.31	40.64	20.09	17.82	40.55	15.31	15.58	36.46	22.49	22.59
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.55	0.16	4.12	0.12	0.03	3.45	2.71	3.22	3.63	3.88	4.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.64	0.28	0.82	0.38	0.10	0.79	0.60	0.62	0.23	0.62	0.62
d, Delay for Lane Group [s/veh]	37.65	30.77	27.47	44.76	20.21	17.84	43.99	18.02	18.79	40.09	26.37	26.77
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.46	5.74	1.72	2.77	4.02	0.71	2.65	8.58	8.46	0.81	8.12	7.99
50th-Percentile Queue Length [ft]	36.40	143.46	42.93	69.15	100.50	17.70	66.33	214.52	211.59	20.32	202.95	199.67
95th-Percentile Queue Length [veh]	2.62	9.67	3.09	4.98	7.24	1.27	4.78	13.38	13.23	1.46	12.79	12.62
95th-Percentile Queue Length [ft]	65.52	241.68	77.28	124.46	180.90	31.86	119.40	334.62	330.87	36.58	319.77	315.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.65	30.77	27.47	44.76	20.21	17.84	43.99	18.34	18.79	40.09	26.55	26.77
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	31.10			26.52			20.76			27.06		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.04											
Intersection LOS	C											
Intersection V/C	0.548											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			┌└└			┌└└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	90	120	66	90	30	10	1220	180	20	980	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	90	120	66	90	30	10	1220	180	20	980	10
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	29	39	18	31	10	3	327	48	5	259	3
Total Analysis Volume [veh/h]	7	116	155	70	124	41	11	1307	193	21	1035	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	48	48	3	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.53	0.53	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.28	0.01	0.40	0.41	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1677	600	1810	1900	1787	1810	1900	1889
c, Capacity [veh/h]	474	170	36	1009	949	59	1034	1028
d1, Uniform Delay [s]	27.62	31.94	43.49	16.50	16.84	42.59	12.91	12.92
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	45.20	1.77	5.24	6.24	1.33	1.77	1.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.57	0.97	0.31	0.75	0.78	0.35	0.51	0.51
d, Delay for Lane Group [s/veh]	28.03	77.14	45.26	21.74	23.08	43.91	14.68	14.71
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.92	5.55	0.26	12.68	12.73	0.47	6.65	6.64
50th-Percentile Queue Length [ft]	122.99	138.87	6.43	317.02	318.33	11.86	166.31	165.93
95th-Percentile Queue Length [veh]	8.56	9.42	0.46	18.52	18.59	0.85	10.88	10.86
95th-Percentile Queue Length [ft]	213.93	235.50	11.57	463.02	464.63	21.36	272.06	271.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	28.03	28.03	0.00	77.14	77.14	45.26	22.30	23.08	43.91	14.70	14.71
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	28.03		77.14			22.57			15.27			
Approach LOS	C		E			C			B			
d_I, Intersection Delay [s/veh]	23.46											
Intersection LOS	C											
Intersection V/C	0.700											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	56.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	630	220	670	140	750	0	0	1180	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	630	220	670	140	750	0	0	1180	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	56	171	36	195	0	0	305	10
Total Analysis Volume [veh/h]	0	0	0	643	224	684	145	779	0	0	1218	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	9	50	37	37
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.10	0.56	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.45	0.22	0.24	0.42	0.08	0.22	0.23	0.23
s, saturation flow rate [veh/h]	900	1848	1469	900	1810	3618	3618	1855
c, Capacity [veh/h]	304	624	496	304	180	2026	1482	760
d1, Uniform Delay [s]	29.80	25.44	25.88	29.80	39.69	11.10	20.42	20.27
k, delay calibration	0.50	0.14	0.18	0.50	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	175.4	1.61	2.97	135.1	3.25	0.55	1.57	2.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

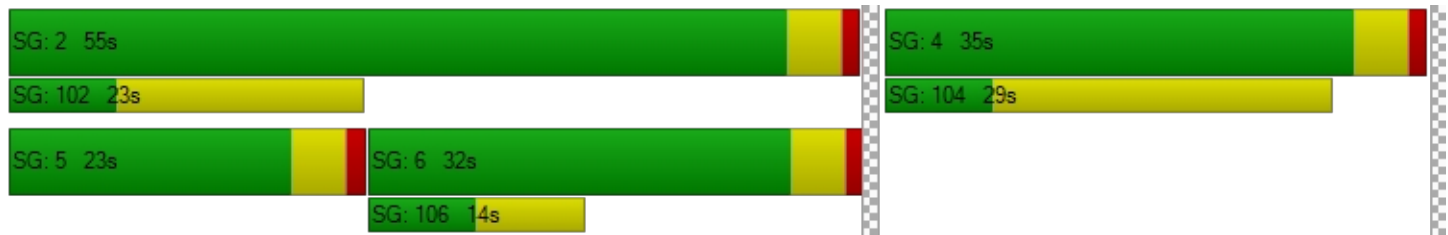
X, volume / capacity	1.34	0.66	0.70	1.25	0.81	0.38	0.57	0.55
d, Delay for Lane Group [s/veh]	205.2	27.05	28.85	164.9	42.94	11.66	21.99	23.15
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	20.78	7.22	6.36	17.38	3.26	4.18	6.81	7.05
50th-Percentile Queue Length [ft]	519.5	180.4	158.9	434.4	81.44	104.61	170.26	176.14
95th-Percentile Queue Length [veh]	33.14	11.62	10.49	27.40	5.86	7.53	11.09	11.40
95th-Percentile Queue Length [ft]	828.5	290.6	262.3	685.0	146.59	188.29	277.26	284.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	133.93	27.40	108.71	42.94	11.66	0.00	0.00	22.35	23.15
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			108.10			16.57			22.38		
Approach LOS	A			F			B			C		
d_I, Intersection Delay [s/veh]	56.55											
Intersection LOS	E											
Intersection V/C	0.766											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.704

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔↔						↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	150	390	250	0	0	0	0	750	670	790	1020	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	390	250	0	0	0	0	750	670	790	1020	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	125	80	0	0	0	0	203	182	212	274	0
Total Analysis Volume [veh/h]	192	499	320	0	0	0	0	813	726	849	1096	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21		26	26	26	29	60
g / C, Green / Cycle	0.23	0.23	0.23		0.29	0.29	0.29	0.32	0.67
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.20		0.21	0.26	0.26	0.24	0.30
s, saturation flow rate [veh/h]	1850	1729	1563		3618	1492	1492	3514	3618
c, Capacity [veh/h]	429	401	363		1051	434	434	1139	2409
d1, Uniform Delay [s]	32.92	32.92	33.40		28.79	30.54	30.54	27.13	7.22
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.63	1.74	2.83		0.37	2.49	2.49	4.46	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

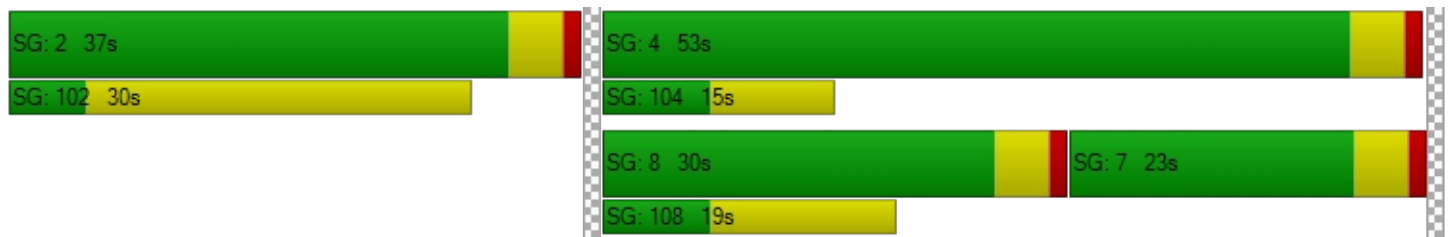
X, volume / capacity	0.83	0.83	0.88		0.73	0.89	0.89	0.75	0.46
d, Delay for Lane Group [s/veh]	34.54	34.66	36.23		29.16	33.03	33.03	31.59	7.84
Lane Group LOS	C	C	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.32	6.86	6.77		7.21	7.89	7.89	8.55	4.51
50th-Percentile Queue Length [ft]	183.09	171.39	169.14		180.21	197.22	197.22	213.63	112.67
95th-Percentile Queue Length [veh]	11.76	11.15	11.03		11.61	12.50	12.50	13.34	7.99
95th-Percentile Queue Length [ft]	294.04	278.74	275.79		290.29	312.38	312.38	333.48	199.70

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.54	34.62	36.23	0.00	0.00	0.00	0.00	29.16	33.03	31.59	7.84	0.00
Movement LOS	C	C	D					C	C	C	A	
d_A, Approach Delay [s/veh]	35.11			0.00			31.10			18.21		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	26.42											
Intersection LOS	C											
Intersection V/C	0.704											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	53.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	130	480	120	170	370	90	110	1150	50	110	980	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	480	120	170	370	90	110	1150	50	110	980	60
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	122	31	49	107	26	31	322	14	32	286	18
Total Analysis Volume [veh/h]	132	489	122	198	430	105	123	1287	56	129	1145	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	33	33	14	37	37	10	49	49	5	44	44
g / C, Green / Cycle	0.09	0.28	0.28	0.12	0.31	0.31	0.08	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.26	0.08	0.11	0.15	0.15	0.07	0.36	0.04	0.07	0.32	0.04
s, saturation flow rate [veh/h]	1810	1900	1566	1810	1900	1750	1810	3618	1564	1810	3618	1571
c, Capacity [veh/h]	159	524	432	218	586	540	149	1471	636	82	1336	580
d1, Uniform Delay [s]	53.86	42.37	34.12	52.12	33.57	33.67	54.21	32.82	21.93	57.31	34.94	24.99
k, delay calibration	0.04	0.31	0.11	0.29	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.17	18.19	0.35	28.04	0.59	0.66	4.26	7.56	0.27	262.99	7.27	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

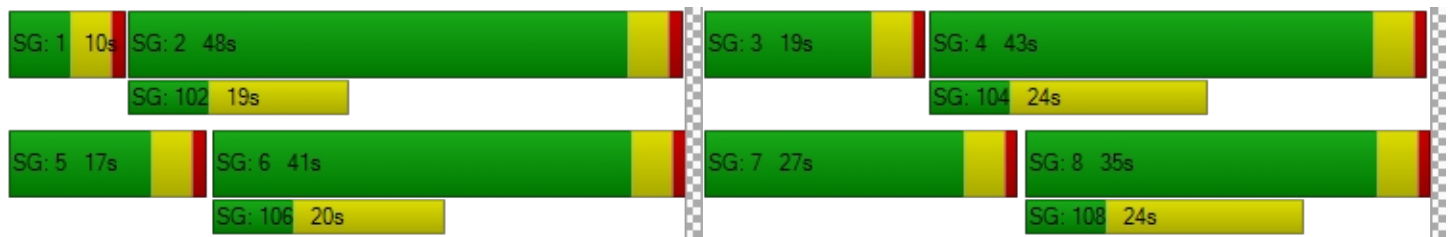
X, volume / capacity	0.83	0.93	0.28	0.91	0.47	0.48	0.82	0.88	0.09	1.57	0.86	0.12
d, Delay for Lane Group [s/veh]	58.03	60.56	34.48	80.16	34.16	34.33	58.47	40.38	22.20	320.30	42.21	25.42
Lane Group LOS	E	E	C	F	C	C	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.07	16.50	2.83	7.53	6.54	6.15	3.80	18.20	1.02	8.45	16.35	1.38
50th-Percentile Queue Length [ft]	101.79	412.45	70.63	188.16	163.48	153.85	95.09	454.93	25.41	211.34	408.85	34.53
95th-Percentile Queue Length [veh]	7.33	23.16	5.09	12.03	10.73	10.22	6.85	25.19	1.83	14.62	22.99	2.49
95th-Percentile Queue Length [ft]	183.22	578.99	127.14	300.64	268.32	255.56	171.16	629.83	45.74	365.61	574.65	62.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.03	60.56	34.48	80.16	34.22	34.33	58.47	40.38	22.20	320.30	42.21	25.42
Movement LOS	E	E	C	F	C	C	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.83			46.65			41.20			68.02		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	53.08											
Intersection LOS	D											
Intersection V/C	0.794											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↻			↵↻			↵↻			↵↻		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	20	600	50	110	420	50	40	390	60	100	370	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	600	50	110	420	50	40	390	60	100	370	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	159	13	30	113	13	12	116	18	27	101	11
Total Analysis Volume [veh/h]	21	637	53	118	452	54	48	465	72	109	405	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	31	31	31	31	31
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.19	0.15	0.14	0.14	0.05	0.24	0.05	0.12	0.24
s, saturation flow rate [veh/h]	906	1900	1840	762	1900	1820	955	1900	1570	941	1862
c, Capacity [veh/h]	460	953	923	377	953	913	231	728	602	225	713
d1, Uniform Delay [s]	14.30	12.16	12.18	18.43	11.48	11.50	30.59	20.13	15.94	33.16	20.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	1.09	1.14	2.17	0.70	0.74	0.16	0.47	0.03	0.60	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.37	0.37	0.31	0.27	0.27	0.21	0.64	0.12	0.48	0.63
d, Delay for Lane Group [s/veh]	14.49	13.25	13.32	20.59	12.18	12.24	30.75	20.60	15.97	33.76	20.44
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.24	3.79	3.71	1.76	2.62	2.54	0.81	6.62	0.81	2.00	6.35
50th-Percentile Queue Length [ft]	6.10	94.67	92.71	43.94	65.38	63.57	20.28	165.58	20.14	50.02	158.85
95th-Percentile Queue Length [veh]	0.44	6.82	6.68	3.16	4.71	4.58	1.46	10.84	1.45	3.60	10.49
95th-Percentile Queue Length [ft]	10.98	170.40	166.88	79.10	117.68	114.43	36.50	271.10	36.25	90.04	262.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.49	13.28	13.32	20.59	12.20	12.24	30.75	20.60	15.97	33.76	20.44	20.44
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	13.32			13.79			20.87			23.04		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.41											
Intersection LOS	B											
Intersection V/C	0.430											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	130	610	10	40	530	50	140	450	40	40	280	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	610	10	40	530	50	140	450	40	40	280	100
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	170	3	11	145	14	40	130	12	11	76	27
Total Analysis Volume [veh/h]	145	682	11	44	578	55	161	518	46	44	305	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	33	33	33	33	33
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.18	0.18	0.18	0.06	0.17	0.17	0.15	0.30	0.05	0.16	0.07
s, saturation flow rate [veh/h]	806	1900	1888	763	1900	1831	1089	1866	860	1900	1571
c, Capacity [veh/h]	409	1008	1002	385	1008	972	327	685	144	697	577
d1, Uniform Delay [s]	19.18	12.13	12.13	17.20	11.92	11.95	31.55	25.84	40.58	21.48	19.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.16	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	0.94	0.94	0.60	0.83	0.87	0.43	3.80	0.44	0.16	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.35	0.34	0.34	0.11	0.32	0.32	0.49	0.82	0.30	0.44	0.19
d, Delay for Lane Group [s/veh]	21.58	13.06	13.07	17.80	12.75	12.82	31.98	29.64	41.02	21.64	19.43
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.34	3.94	3.92	0.62	3.57	3.49	3.10	10.98	0.94	4.64	1.50
50th-Percentile Queue Length [ft]	58.48	98.39	97.92	15.51	89.21	87.16	77.47	274.61	23.62	116.09	37.41
95th-Percentile Queue Length [veh]	4.21	7.08	7.05	1.12	6.42	6.28	5.58	16.42	1.70	8.18	2.69
95th-Percentile Queue Length [ft]	105.26	177.10	176.25	27.92	160.58	156.88	139.45	410.49	42.52	204.44	67.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.58	13.07	13.07	17.80	12.78	12.82	31.98	29.64	29.64	41.02	21.64	19.43
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	14.54			13.11			30.16			22.97		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.81											
Intersection LOS	B											
Intersection V/C	0.485											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	480	30	40	480	50	70	130	50	40	140	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	480	30	40	480	50	70	130	50	40	140	30
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	8	12	142	15	20	37	14	12	42	9
Total Analysis Volume [veh/h]	32	520	32	47	568	59	80	148	57	48	170	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.04	0.30	0.05	0.34	0.18	0.13	0.02
s, saturation flow rate [veh/h]	811	1865	870	1841	1551	1743	1524
c, Capacity [veh/h]	180	773	234	763	747	827	659
d1, Uniform Delay [s]	26.79	14.64	23.96	15.63	11.69	10.94	9.92
k, delay calibration	0.04	0.08	0.04	0.16	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.95	0.15	3.30	1.48	0.78	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

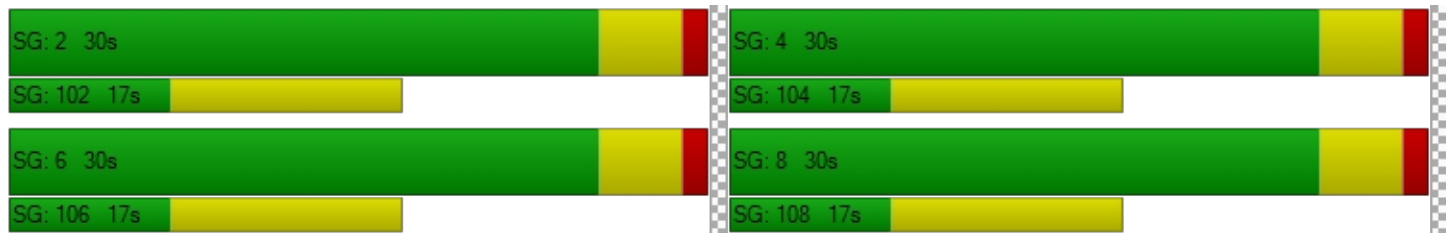
X, volume / capacity	0.18	0.71	0.20	0.82	0.38	0.26	0.05
d, Delay for Lane Group [s/veh]	26.97	15.59	24.12	18.93	13.16	11.72	10.08
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.61	0.59	7.26	2.53	1.80	0.27
50th-Percentile Queue Length [ft]	10.69	140.28	14.68	181.40	63.31	44.96	6.79
95th-Percentile Queue Length [veh]	0.77	9.50	1.06	11.67	4.56	3.24	0.49
95th-Percentile Queue Length [ft]	19.23	237.40	26.43	291.85	113.97	80.93	12.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.97	15.59	15.59	24.12	18.93	18.93	13.16	13.16	13.16	11.72	11.72	10.08
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.22			19.29			13.16			11.48		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.524											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.467

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	950	50	100	790	40	70	250	120	120	330	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	950	50	100	790	40	70	250	120	120	330	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	250	13	26	205	10	21	76	37	32	88	8
Total Analysis Volume [veh/h]	74	1000	53	104	819	41	86	306	147	128	353	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.57	0.57	0.57	0.57	0.57	0.57	0.32	0.32	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.11	0.28	0.28	0.19	0.23	0.23	0.08	0.16	0.10	0.12	0.19	0.02
s, saturation flow rate [veh/h]	646	1900	1856	543	1900	1850	1033	1900	1532	1072	1900	1551
c, Capacity [veh/h]	361	1076	1052	297	1076	1048	224	605	488	256	605	494
d1, Uniform Delay [s]	15.20	10.42	10.45	18.93	9.73	9.76	33.03	22.14	20.55	32.43	22.81	18.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.28	1.62	1.67	3.23	1.12	1.17	0.40	0.24	0.13	0.56	0.33	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

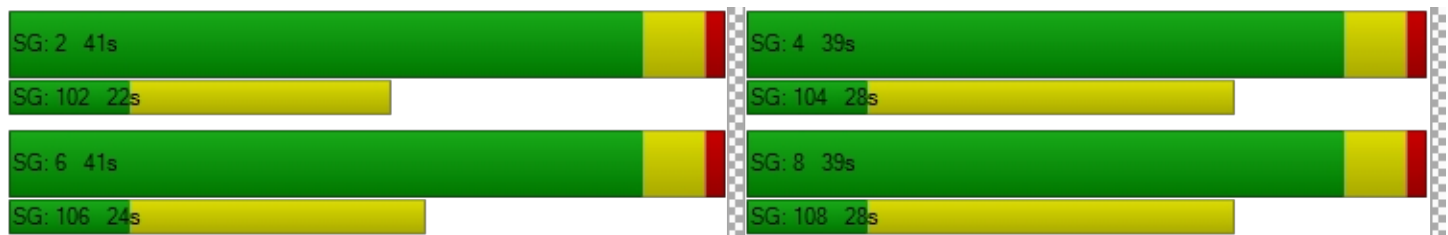
X, volume / capacity	0.20	0.49	0.50	0.35	0.40	0.41	0.38	0.51	0.30	0.50	0.58	0.06
d, Delay for Lane Group [s/veh]	16.48	12.04	12.12	22.16	10.86	10.93	33.43	22.38	20.67	32.99	23.15	18.99
Lane Group LOS	B	B	B	C	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.95	5.30	5.24	1.64	4.01	3.96	1.57	4.51	2.01	2.38	5.46	0.41
50th-Percentile Queue Length [ft]	23.68	132.55	130.90	40.92	100.22	99.11	39.15	112.63	50.19	59.50	136.51	10.25
95th-Percentile Queue Length [veh]	1.70	9.08	8.99	2.95	7.22	7.14	2.82	7.99	3.61	4.28	9.29	0.74
95th-Percentile Queue Length [ft]	42.62	226.96	224.72	73.66	180.40	178.39	70.48	199.66	90.33	107.10	232.32	18.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.48	12.08	12.12	22.16	10.89	10.93	33.43	22.38	20.67	32.99	23.15	18.99
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	12.37			12.11			23.68			25.34		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.35											
Intersection LOS	B											
Intersection V/C	0.467											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	110	80	40	70	60	40	330	30	40	420	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	110	80	40	70	60	40	330	30	40	420	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	31	23	10	18	15	11	91	8	11	116	6
Total Analysis Volume [veh/h]	23	125	91	41	72	62	44	363	33	44	465	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	16	16	16	54	54	54	54	54	54
g / C, Green / Cycle	0.20	0.20	0.20	0.68	0.68	0.68	0.68	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.04	0.05	0.19	0.02	0.04	0.24	0.01
s, saturation flow rate [veh/h]	1678	1315	1575	940	1900	1559	1031	1900	1546
c, Capacity [veh/h]	393	330	322	598	1292	1061	676	1292	1051
d1, Uniform Delay [s]	29.35	26.87	26.27	8.87	5.04	4.17	7.76	5.40	4.14
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.53	0.61	0.29	0.24	0.54	0.05	0.19	0.78	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

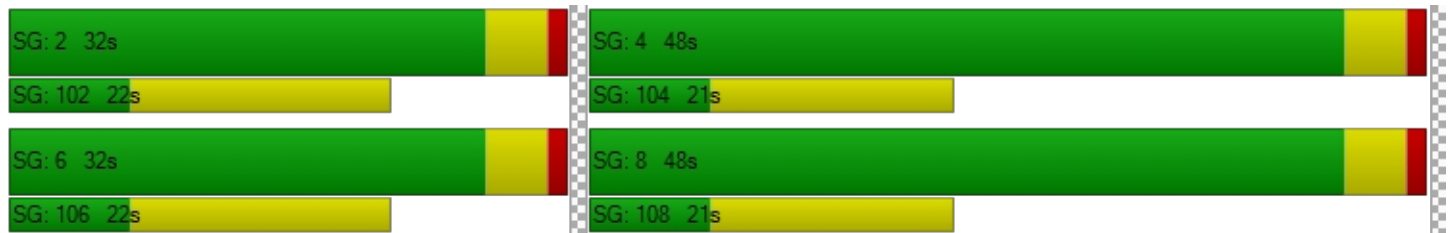
X, volume / capacity	0.61	0.34	0.19	0.07	0.28	0.03	0.07	0.36	0.02
d, Delay for Lane Group [s/veh]	30.87	27.48	26.56	9.11	5.59	4.22	7.95	6.18	4.17
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.21	1.80	0.96	0.38	2.08	0.16	0.34	2.87	0.10
50th-Percentile Queue Length [ft]	105.23	45.07	24.10	9.45	52.10	3.95	8.55	71.80	2.62
95th-Percentile Queue Length [veh]	7.57	3.25	1.74	0.68	3.75	0.28	0.62	5.17	0.19
95th-Percentile Queue Length [ft]	189.34	81.13	43.38	17.00	93.78	7.11	15.40	129.24	4.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.87	30.87	30.87	27.48	27.48	26.56	9.11	5.59	4.22	7.95	6.18	4.17
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.87			27.16			5.84			6.24		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.387											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	700	30	80	490	70	50	350	30	100	410	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	700	30	80	490	70	50	350	30	100	410	30
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	182	8	21	128	18	13	93	8	27	109	8
Total Analysis Volume [veh/h]	21	727	31	84	514	73	53	373	32	107	437	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.12	0.16	0.16	0.05	0.20	0.02	0.10	0.23	0.02
s, saturation flow rate [veh/h]	839	1900	1867	716	1900	1804	964	1900	1568	1021	1900	1575
c, Capacity [veh/h]	470	1061	1042	395	1061	1007	182	621	513	225	621	515
d1, Uniform Delay [s]	12.26	9.77	9.78	14.93	9.27	9.29	34.61	22.55	18.50	33.61	23.54	18.50
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.10	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.95	0.97	1.23	0.67	0.71	0.32	0.35	0.02	0.58	1.35	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.04	0.36	0.36	0.21	0.28	0.29	0.29	0.60	0.06	0.47	0.70	0.06
d, Delay for Lane Group [s/veh]	12.44	10.72	10.75	16.15	9.93	10.00	34.94	22.90	18.52	34.19	24.89	18.52
Lane Group LOS	B	B	B	B	A	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.22	3.58	3.54	1.07	2.65	2.57	0.98	5.67	0.40	2.00	7.10	0.40
50th-Percentile Queue Length [ft]	5.56	89.54	88.51	26.80	66.31	64.14	24.57	141.82	9.94	49.94	177.42	9.94
95th-Percentile Queue Length [veh]	0.40	6.45	6.37	1.93	4.77	4.62	1.77	9.58	0.72	3.60	11.47	0.72
95th-Percentile Queue Length [ft]	10.01	161.17	159.33	48.24	119.36	115.46	44.22	239.47	17.90	89.88	286.64	17.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.44	10.73	10.75	16.15	9.96	10.00	34.94	22.90	18.52	34.19	24.89	18.52
Movement LOS	B	B	B	B	A	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	10.78			10.74			23.99			26.27		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.80											
Intersection LOS	B											
Intersection V/C	0.432											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	40	470	40	60	270	40	70	380	50	80	380	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	470	40	60	270	40	70	380	50	80	380	50
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	131	11	17	74	11	20	106	14	21	101	13
Total Analysis Volume [veh/h]	44	522	44	66	298	44	78	424	56	85	403	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22	22	22
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.04	0.27	0.03	0.07	0.16	0.03	0.08	0.22	0.04	0.09	0.21	0.03
s, saturation flow rate [veh/h]	1095	1900	1557	893	1900	1556	983	1900	1515	965	1900	1530
c, Capacity [veh/h]	549	1056	865	381	1056	865	241	594	473	227	594	478
d1, Uniform Delay [s]	12.78	9.51	7.10	17.88	8.18	7.10	28.07	21.26	17.15	29.10	20.96	17.11
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	1.65	0.11	0.99	0.67	0.11	0.29	0.60	0.04	0.38	0.51	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

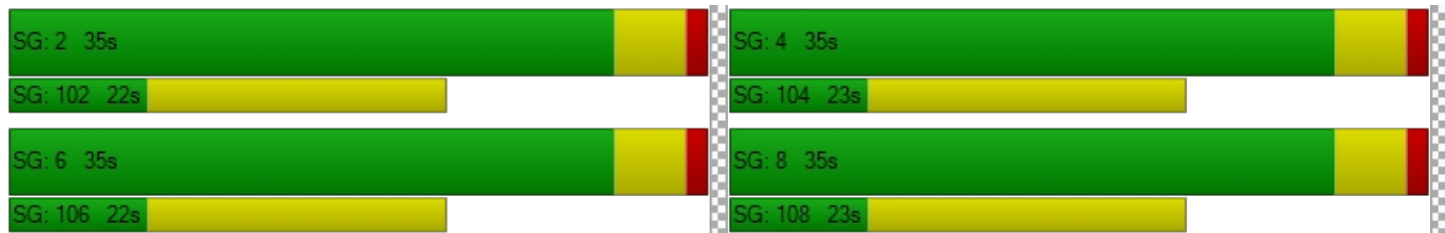
X, volume / capacity	0.08	0.49	0.05	0.17	0.28	0.05	0.32	0.71	0.12	0.37	0.68	0.11
d, Delay for Lane Group [s/veh]	13.07	11.16	7.21	18.87	8.85	7.21	28.36	21.87	17.19	29.48	21.47	17.15
Lane Group LOS	B	B	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.43	4.45	0.28	0.83	2.14	0.28	1.19	5.82	0.61	1.33	5.45	0.58
50th-Percentile Queue Length [ft]	10.70	111.29	6.91	20.87	53.60	6.91	29.77	145.50	15.37	33.35	136.13	14.51
95th-Percentile Queue Length [veh]	0.77	7.91	0.50	1.50	3.86	0.50	2.14	9.78	1.11	2.40	9.27	1.04
95th-Percentile Queue Length [ft]	19.27	197.79	12.43	37.57	96.47	12.43	53.59	244.41	27.67	60.02	231.80	26.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.07	11.16	7.21	18.87	8.85	7.21	28.36	21.87	17.19	29.48	21.47	17.15
Movement LOS	B	B	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.01			10.29			22.30			22.31		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.74											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	450	10	140	450	130	40	390	190	90	280	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	450	10	140	450	130	40	390	190	90	280	120
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	130	3	43	137	40	11	109	53	23	73	31
Total Analysis Volume [veh/h]	46	519	12	171	550	159	45	434	212	93	290	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.06	0.14	0.14	0.19	0.19	0.20	0.04	0.23	0.14	0.10	0.15	0.08
s, saturation flow rate [veh/h]	751	1900	1883	885	1900	1737	1095	1900	1563	963	1900	1564
c, Capacity [veh/h]	354	932	924	436	932	852	358	707	582	258	707	582
d1, Uniform Delay [s]	16.49	10.56	10.57	16.88	11.27	11.30	21.46	17.88	15.96	27.28	16.28	14.98
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	0.77	0.78	2.64	1.26	1.40	0.06	0.32	0.14	0.32	0.14	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

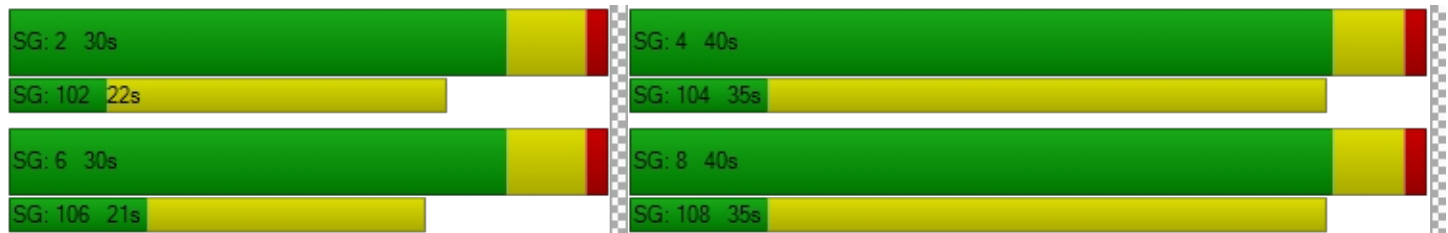
X, volume / capacity	0.13	0.29	0.29	0.39	0.40	0.40	0.13	0.61	0.36	0.36	0.41	0.21
d, Delay for Lane Group [s/veh]	17.24	11.33	11.35	19.52	12.52	12.69	21.52	18.20	16.10	27.60	16.42	15.05
Lane Group LOS	B	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.63	2.79	2.77	2.13	3.22	3.01	0.57	5.31	2.31	1.41	3.22	1.27
50th-Percentile Queue Length [ft]	15.80	69.66	69.27	53.30	80.40	75.27	14.27	132.87	57.82	35.17	80.58	31.70
95th-Percentile Queue Length [veh]	1.14	5.02	4.99	3.84	5.79	5.42	1.03	9.10	4.16	2.53	5.80	2.28
95th-Percentile Queue Length [ft]	28.43	125.39	124.69	95.95	144.73	135.49	25.69	227.40	104.08	63.31	145.04	57.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.24	11.34	11.35	19.52	12.58	12.69	21.52	18.20	16.10	27.60	16.42	15.05
Movement LOS	B	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.81			13.95			17.77			18.13		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.28											
Intersection LOS	B											
Intersection V/C	0.424											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	530	70	40	460	20	60	60	40	20	100	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	530	70	40	460	20	60	60	40	20	100	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	157	21	12	133	6	16	16	11	6	30	6
Total Analysis Volume [veh/h]	12	630	83	46	530	23	65	65	43	24	120	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	33	33	33	33	33	33	33
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	7	7
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.01	0.39	0.06	0.28	0.02	0.11	0.09
s, saturation flow rate [veh/h]	875	1848	740	1900	1522	1641	1792
c, Capacity [veh/h]	440	927	315	953	763	513	521
d1, Uniform Delay [s]	9.34	6.73	13.34	5.73	4.20	11.16	11.10
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.52	0.08	0.19	0.01	0.14	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

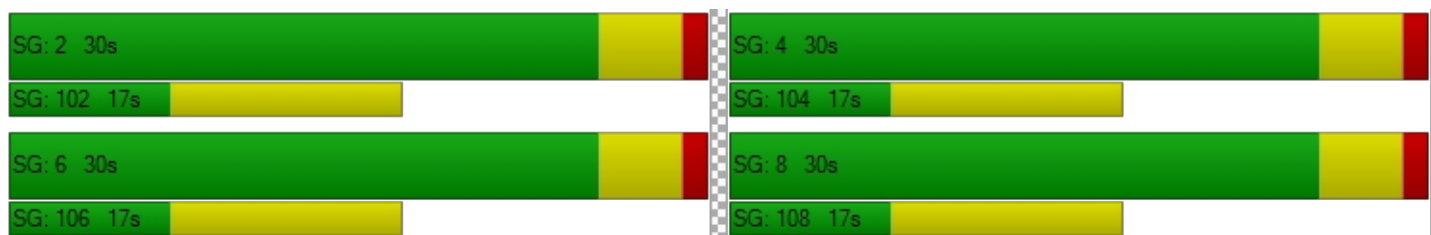
X, volume / capacity	0.03	0.77	0.15	0.56	0.03	0.34	0.32
d, Delay for Lane Group [s/veh]	9.35	7.25	13.42	5.92	4.20	11.31	11.24
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.05	2.12	0.26	1.31	0.04	0.81	0.78
50th-Percentile Queue Length [ft]	1.24	52.88	6.45	32.63	1.03	20.14	19.45
95th-Percentile Queue Length [veh]	0.09	3.81	0.46	2.35	0.07	1.45	1.40
95th-Percentile Queue Length [ft]	2.23	95.19	11.60	58.74	1.85	36.25	35.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.35	7.25	7.25	13.42	5.92	4.20	11.31	11.31	11.31	11.24	11.24	11.24
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.28			6.43			11.31			11.24		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.79											
Intersection LOS	A											
Intersection V/C	0.491											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	1010	80	60	980	30	100	160	70	60	260	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1010	80	60	980	30	100	160	70	60	260	50
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	279	22	16	255	8	29	46	20	17	74	14
Total Analysis Volume [veh/h]	33	1115	88	62	1020	31	115	185	81	68	296	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.06	0.32	0.32	0.13	0.28	0.28	0.11	0.15	0.06	0.19
s, saturation flow rate [veh/h]	545	1900	1845	472	1900	1872	1027	1758	1096	1828
c, Capacity [veh/h]	282	1043	1012	238	1043	1028	242	591	297	615
d1, Uniform Delay [s]	17.81	11.97	12.01	21.66	11.27	11.29	32.65	20.76	28.03	21.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	2.39	2.49	2.64	1.76	1.80	0.54	0.20	0.14	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

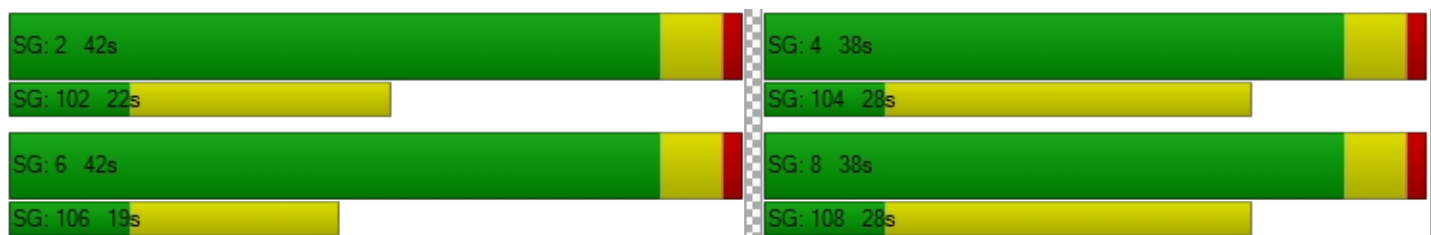
X, volume / capacity	0.12	0.58	0.59	0.26	0.51	0.51	0.47	0.45	0.23	0.57
d, Delay for Lane Group [s/veh]	18.65	14.36	14.50	24.29	13.03	13.09	33.19	20.96	28.18	22.15
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	6.90	6.78	1.07	5.91	5.87	2.08	3.68	1.09	5.14
50th-Percentile Queue Length [ft]	11.56	172.47	169.43	26.84	147.74	146.73	52.02	91.88	27.28	128.44
95th-Percentile Queue Length [veh]	0.83	11.21	11.05	1.93	9.90	9.84	3.75	6.62	1.96	8.85
95th-Percentile Queue Length [ft]	20.80	280.17	276.17	48.31	247.42	246.05	93.64	165.38	49.11	221.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.65	14.42	14.50	24.29	13.06	13.09	33.19	20.96	20.96	28.18	22.15	22.15
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.54			13.68			24.65			23.13		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.61											
Intersection LOS	B											
Intersection V/C	0.515											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	41.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.939

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	170	60	50	110	30	70	360	60	60	350	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	170	60	50	110	30	70	360	60	60	350	20
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	59	21	13	29	8	18	94	16	16	91	5
Total Analysis Volume [veh/h]	28	235	83	52	114	31	73	375	62	62	363	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	51	51	51	51
g / C, Green / Cycle	0.25	0.25	0.25	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.22	0.16	0.02	0.72	0.04	0.65	0.01
s, saturation flow rate [veh/h]	1583	1039	1538	622	1558	656	1546
c, Capacity [veh/h]	445	319	385	447	989	468	981
d1, Uniform Delay [s]	28.64	24.86	22.91	17.86	5.57	16.60	5.42
k, delay calibration	0.17	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.65	1.31	0.09	43.08	0.12	24.08	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.78	0.52	0.08	1.00	0.06	0.91	0.02
d, Delay for Lane Group [s/veh]	33.29	26.17	23.00	60.94	5.69	40.67	5.46
Lane Group LOS	C	C	C	F	A	D	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	6.63	2.61	0.44	12.31	0.36	9.46	0.12
50th-Percentile Queue Length [ft]	165.65	65.18	10.92	307.75	8.97	236.41	2.95
95th-Percentile Queue Length [veh]	10.85	4.69	0.79	18.09	0.65	14.50	0.21
95th-Percentile Queue Length [ft]	271.19	117.32	19.66	452.35	16.14	362.49	5.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.29	33.29	33.29	26.17	26.17	23.00	60.94	60.94	5.69	40.67	40.67	5.46
Movement LOS	C	C	C	C	C	C	E	E	A	D	D	A
d_A, Approach Delay [s/veh]	33.29			25.67			54.22			39.01		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	41.11											
Intersection LOS	D											
Intersection V/C	0.939											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	10	750	70	20	730	70	50	370	40	70	330	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	750	70	20	730	70	50	370	40	70	330	60
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	205	19	5	189	18	13	95	10	19	91	17
Total Analysis Volume [veh/h]	11	821	77	21	757	73	51	380	41	78	366	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.02	0.24	0.24	0.03	0.22	0.22	0.05	0.23	0.08	0.24
s, saturation flow rate [veh/h]	670	1900	1832	629	1900	1832	961	1863	979	1834
c, Capacity [veh/h]	361	1050	1013	335	1050	1013	182	619	195	609
d1, Uniform Delay [s]	14.44	10.52	10.54	15.38	10.27	10.29	34.54	23.05	34.64	23.35
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.04	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	1.31	1.37	0.36	1.14	1.20	0.31	1.11	0.49	1.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.43	0.44	0.06	0.40	0.40	0.28	0.68	0.40	0.71
d, Delay for Lane Group [s/veh]	14.60	11.83	11.91	15.74	11.42	11.49	34.85	24.16	35.13	24.98
Lane Group LOS	B	B	B	B	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.13	4.60	4.49	0.26	4.14	4.04	0.93	6.58	1.45	6.93
50th-Percentile Queue Length [ft]	3.28	114.97	112.15	6.62	103.54	100.91	23.28	164.50	36.15	173.33
95th-Percentile Queue Length [veh]	0.24	8.12	7.96	0.48	7.45	7.27	1.68	10.79	2.60	11.25
95th-Percentile Queue Length [ft]	5.91	202.89	198.99	11.91	186.37	181.64	41.90	269.67	65.06	281.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.60	11.86	11.91	15.74	11.45	11.49	34.85	24.16	24.16	35.13	24.98	24.98
Movement LOS	B	B	B	B	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	11.90			11.56			25.31			26.53		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.83											
Intersection LOS	B											
Intersection V/C	0.478											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	30	550	10	20	360	40	60	270	30	120	220	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	550	10	20	360	40	60	270	30	120	220	60
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	151	3	6	108	12	16	70	8	30	56	15
Total Analysis Volume [veh/h]	33	606	11	24	434	48	62	281	31	121	222	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.03	0.32	0.01	0.03	0.23	0.03	0.06	0.17	0.11	0.16
s, saturation flow rate [veh/h]	961	1900	1552	825	1900	1542	1068	1848	1063	1769
c, Capacity [veh/h]	481	1045	854	365	1045	848	268	589	259	563
d1, Uniform Delay [s]	13.31	10.40	7.13	16.78	9.18	7.31	26.52	19.56	28.77	19.35
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.28	2.35	0.03	0.35	1.22	0.13	0.16	0.28	0.49	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.07	0.58	0.01	0.07	0.42	0.06	0.23	0.53	0.47	0.50
d, Delay for Lane Group [s/veh]	13.59	12.75	7.16	17.13	10.40	7.44	26.69	19.83	29.26	19.61
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.33	5.72	0.07	0.29	3.54	0.31	0.89	3.84	1.87	3.45
50th-Percentile Queue Length [ft]	8.35	142.96	1.73	7.17	88.44	7.76	22.18	96.07	46.83	86.23
95th-Percentile Queue Length [veh]	0.60	9.64	0.12	0.52	6.37	0.56	1.60	6.92	3.37	6.21
95th-Percentile Queue Length [ft]	15.03	241.00	3.12	12.91	159.19	13.97	39.92	172.93	84.30	155.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.59	12.75	7.16	17.13	10.40	7.44	26.69	19.83	19.83	29.26	19.61	19.61
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.70			10.44			20.97			22.50		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.75											
Intersection LOS	B											
Intersection V/C	0.488											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	570	160	110	440	120	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	570	160	110	440	120	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	47	31	124	37	24
Total Analysis Volume [veh/h]	676	190	124	494	146	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	6	6
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.19	0.19
(v / s)_j Volume / Saturation Flow Rate	0.36	0.12	0.16	0.26	0.08	0.06
s, saturation flow rate [veh/h]	1900	1556	768	1900	1810	1508
c, Capacity [veh/h]	1032	845	387	1032	335	279
d1, Uniform Delay [s]	5.49	4.03	12.06	4.78	12.23	12.01
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.05	0.18	0.13	0.33	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

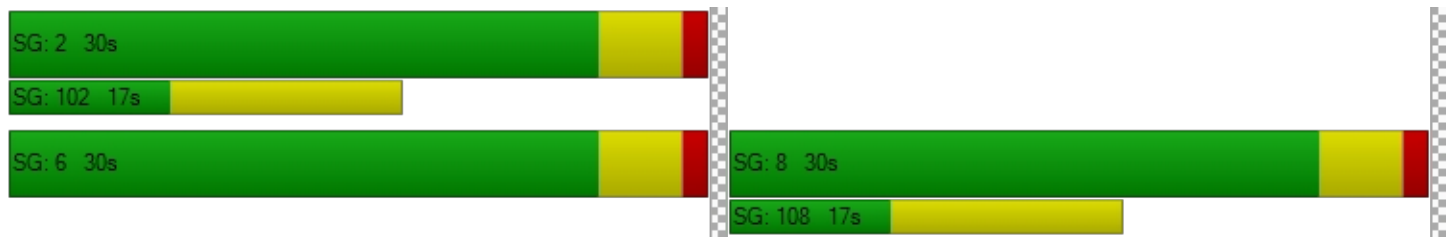
X, volume / capacity	0.66	0.22	0.32	0.48	0.44	0.35
d, Delay for Lane Group [s/veh]	5.75	4.08	12.23	4.91	12.56	12.29
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.56	0.32	0.67	0.98	0.83	0.54
50th-Percentile Queue Length [ft]	39.06	7.95	16.69	24.56	20.70	13.54
95th-Percentile Queue Length [veh]	2.81	0.57	1.20	1.77	1.49	0.97
95th-Percentile Queue Length [ft]	70.30	14.32	30.05	44.20	37.26	24.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.75	4.08	12.23	4.91	12.56	12.29
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.38		6.38		12.45	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.73					
Intersection LOS	A					
Intersection V/C	0.436					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1000	100	100	960	50	50	250	140	60	390	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1000	100	100	960	50	50	250	140	60	390	40
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	297	30	26	251	13	14	71	40	17	110	11
Total Analysis Volume [veh/h]	36	1188	119	104	1003	52	57	283	158	68	442	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	29	29	29	29	29
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.07	0.33	0.08	0.22	0.28	0.28	0.06	0.15	0.10	0.06	0.26
s, saturation flow rate [veh/h]	542	3618	1556	479	1900	1856	917	1900	1558	1101	1862
c, Capacity [veh/h]	267	1911	822	225	1004	980	177	678	556	323	664
d1, Uniform Delay [s]	19.38	13.24	9.63	26.27	12.35	12.39	34.93	19.44	18.42	26.49	22.41
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	1.53	0.37	6.65	2.00	2.08	1.04	0.41	0.28	0.32	2.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

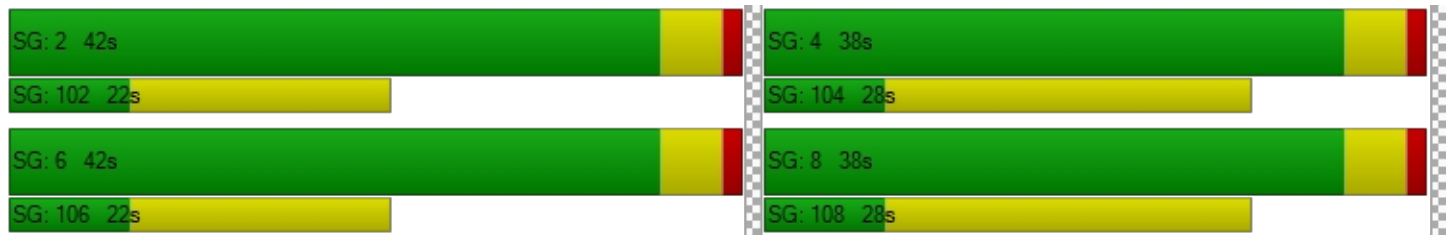
X, volume / capacity	0.13	0.62	0.14	0.46	0.53	0.53	0.32	0.42	0.28	0.21	0.73
d, Delay for Lane Group [s/veh]	20.43	14.78	10.00	32.92	14.36	14.47	35.98	19.86	18.69	26.81	24.91
Lane Group LOS	C	B	B	C	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.55	7.32	1.09	2.12	6.00	5.93	1.10	3.87	2.05	1.11	8.14
50th-Percentile Queue Length [ft]	13.78	182.99	27.29	52.98	149.95	148.25	27.46	96.82	51.24	27.65	203.45
95th-Percentile Queue Length [veh]	0.99	11.76	1.96	3.81	10.01	9.92	1.98	6.97	3.69	1.99	12.82
95th-Percentile Queue Length [ft]	24.80	293.92	49.12	95.37	250.36	248.09	49.43	174.27	92.24	49.77	320.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.43	14.78	10.00	32.92	14.41	14.47	35.98	19.86	18.69	26.81	24.91	24.91
Movement LOS	C	B	B	C	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	14.51			16.07			21.33			25.15		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.63											
Intersection LOS	B											
Intersection V/C	0.590											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.692

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↵			↵↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	250	20	100	130	20	70	470	100	30	730	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	250	20	100	130	20	70	470	100	30	730	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	72	6	31	40	6	19	126	27	8	195	5
Total Analysis Volume [veh/h]	12	289	23	123	160	25	75	506	108	32	781	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	25	46	46	46	46	46
g / C, Green / Cycle	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57
(v / s)_j Volume / Saturation Flow Rate	0.01	0.17	0.21	0.27	0.04	0.11	0.17	0.17	0.04	0.42
s, saturation flow rate [veh/h]	1233	1864	600	600	600	689	1900	1755	817	1887
c, Capacity [veh/h]	132	586	178	189	189	253	1084	1001	467	1076
d1, Uniform Delay [s]	37.64	22.55	23.62	25.61	19.59	26.11	8.85	8.89	12.06	12.83
k, delay calibration	0.11	0.11	0.14	0.27	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.75	6.28	21.96	0.31	2.96	0.68	0.76	0.28	4.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

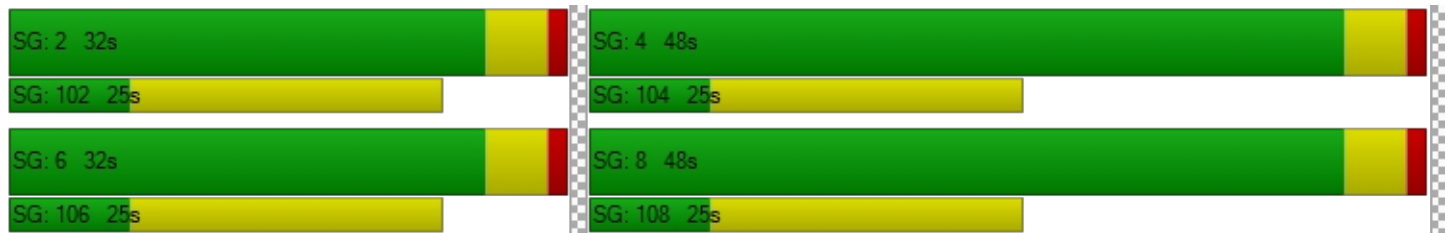
X, volume / capacity	0.09	0.53	0.69	0.85	0.13	0.30	0.29	0.30	0.07	0.75
d, Delay for Lane Group [s/veh]	37.93	23.30	29.89	47.56	19.91	29.06	9.53	9.65	12.34	17.53
Lane Group LOS	D	C	C	D	B	C	A	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	4.65	2.18	3.79	0.33	1.39	2.74	2.61	0.34	10.73
50th-Percentile Queue Length [ft]	5.82	116.31	54.51	94.72	8.30	34.84	68.40	65.35	8.49	268.19
95th-Percentile Queue Length [veh]	0.42	8.19	3.92	6.82	0.60	2.51	4.92	4.71	0.61	16.10
95th-Percentile Queue Length [ft]	10.47	204.75	98.12	170.50	14.93	62.71	123.12	117.63	15.29	402.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.93	23.30	23.30	29.89	47.56	19.91	29.06	9.58	9.65	12.34	17.53	17.53
Movement LOS	D	C	C	C	D	B	C	A	A	B	B	B
d_A, Approach Delay [s/veh]	23.84			38.26			11.71			17.33		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	19.50											
Intersection LOS	B											
Intersection V/C	0.692											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	800	70	70	780	120	60	440	130	60	680	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	800	70	70	780	120	60	440	130	60	680	70
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	221	19	18	203	31	16	116	34	16	186	19
Total Analysis Volume [veh/h]	33	884	77	73	811	125	64	466	138	66	746	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	63	63	73	65	65	38	29	29	38	29	29
g / C, Green / Cycle	0.61	0.53	0.53	0.61	0.54	0.54	0.32	0.24	0.24	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.05	0.26	0.26	0.10	0.25	0.26	0.07	0.16	0.18	0.07	0.22	0.22
s, saturation flow rate [veh/h]	707	1900	1834	715	1900	1780	887	1900	1639	1014	1900	1806
c, Capacity [veh/h]	417	1005	970	421	1024	959	224	457	394	277	459	436
d1, Uniform Delay [s]	11.28	17.91	17.95	11.72	17.04	17.15	32.13	41.38	42.03	30.73	44.21	44.44
k, delay calibration	0.50	0.50	0.50	0.22	0.50	0.50	0.04	0.04	0.06	0.04	0.17	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	1.68	1.76	0.39	1.54	1.69	0.26	0.68	1.55	0.16	11.01	13.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

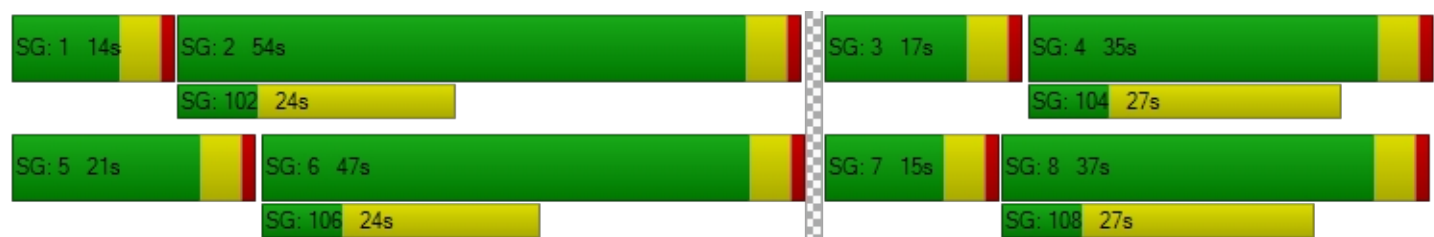
X, volume / capacity	0.08	0.49	0.49	0.17	0.47	0.48	0.29	0.68	0.74	0.24	0.91	0.93
d, Delay for Lane Group [s/veh]	11.65	19.58	19.71	12.12	18.58	18.84	32.39	42.07	43.58	30.89	55.23	58.20
Lane Group LOS	B	B	B	B	B	B	C	D	D	C	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.39	8.86	8.65	0.83	8.42	8.11	1.33	8.48	8.10	1.37	13.41	13.34
50th-Percentile Queue Length [ft]	9.69	221.45	216.27	20.64	210.48	202.85	33.34	212.09	202.50	34.32	335.13	333.55
95th-Percentile Queue Length [veh]	0.70	13.74	13.47	1.49	13.18	12.79	2.40	13.26	12.77	2.47	19.41	19.33
95th-Percentile Queue Length [ft]	17.43	343.48	336.86	37.15	329.44	319.64	60.02	331.51	319.19	61.78	485.24	483.30

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.65	19.64	19.71	12.12	18.69	18.84	32.39	42.56	43.58	30.89	56.53	58.20
Movement LOS	B	B	B	B	B	B	C	D	D	C	E	E
d_A, Approach Delay [s/veh]	19.38			18.23			41.80			54.77		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	32.10											
Intersection LOS	C											
Intersection V/C	0.527											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	10	490	140	40	300	100	90	370	340	70	650	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	490	140	40	300	100	90	370	340	70	650	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	134	38	10	77	26	24	101	92	19	176	14
Total Analysis Volume [veh/h]	11	535	153	41	309	103	98	402	370	76	705	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	36	25	25	25	25	25	25
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.10	0.05	0.16	0.07	0.14	0.21	0.24	0.11	0.20	0.21
s, saturation flow rate [veh/h]	1080	1900	1570	882	1900	1565	710	1900	1524	704	1900	1826
c, Capacity [veh/h]	509	981	810	346	981	808	228	669	537	202	669	643
d1, Uniform Delay [s]	13.73	11.39	9.07	19.21	9.77	8.76	27.52	18.60	19.36	28.93	18.38	18.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.06	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	2.18	0.52	0.70	0.84	0.33	0.48	0.32	0.88	0.43	0.29	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

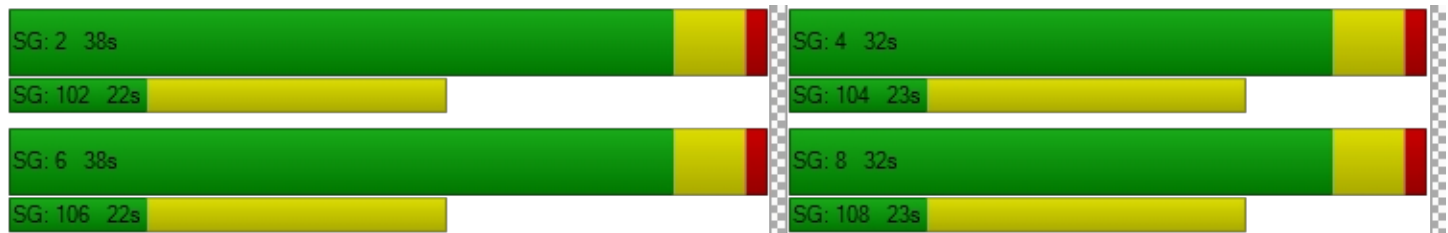
X, volume / capacity	0.02	0.55	0.19	0.12	0.32	0.13	0.43	0.60	0.69	0.38	0.57	0.58
d, Delay for Lane Group [s/veh]	13.81	13.57	9.59	19.91	10.62	9.09	28.00	18.92	20.24	29.36	18.67	18.76
Lane Group LOS	B	B	A	B	B	A	C	B	C	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.11	5.27	1.18	0.54	2.55	0.77	1.52	5.01	4.88	1.20	4.73	4.64
50th-Percentile Queue Length [ft]	2.77	131.78	29.53	13.44	63.68	19.14	38.08	125.28	121.89	30.04	118.25	115.89
95th-Percentile Queue Length [veh]	0.20	9.04	2.13	0.97	4.58	1.38	2.74	8.68	8.50	2.16	8.30	8.17
95th-Percentile Queue Length [ft]	4.99	225.92	53.15	24.19	114.62	34.45	68.54	217.07	212.43	54.07	207.41	204.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.81	13.57	9.59	19.91	10.62	9.09	28.00	18.92	20.24	29.36	18.71	18.76
Movement LOS	B	B	A	B	B	A	C	B	C	C	B	B
d_A, Approach Delay [s/veh]	12.70			11.11			20.50			19.68		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	16.87											
Intersection LOS	B											
Intersection V/C	0.524											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	100	390	70	60	540	250	80	550	340	210	500	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	390	70	60	540	250	80	550	340	210	500	160
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	108	19	19	174	81	22	151	93	60	144	46
Total Analysis Volume [veh/h]	111	432	78	77	696	322	88	602	372	242	576	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.20	0.12	0.05	0.08	0.28	0.29	0.12	0.17	0.24	0.29	0.21	0.21
s, saturation flow rate [veh/h]	561	3618	1547	959	1900	1646	714	3618	1554	823	1900	1712
c, Capacity [veh/h]	207	1570	672	419	825	715	288	1570	675	345	825	743
d1, Uniform Delay [s]	28.90	12.69	11.77	17.07	15.58	15.79	21.85	13.41	14.69	24.69	14.12	14.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.66	0.43	0.35	0.96	3.97	5.02	0.22	0.06	0.30	3.65	0.16	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.54	0.28	0.12	0.18	0.65	0.67	0.31	0.38	0.55	0.70	0.48	0.49
d, Delay for Lane Group [s/veh]	38.56	13.13	12.12	18.04	19.55	20.81	22.07	13.46	14.99	28.34	14.28	14.38
Lane Group LOS	D	B	B	B	B	C	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.38	2.14	0.75	0.96	6.97	6.50	1.17	2.94	4.02	4.06	4.09	3.78
50th-Percentile Queue Length [ft]	59.42	53.44	18.74	24.02	174.35	162.57	29.28	73.45	100.46	101.55	102.33	94.53
95th-Percentile Queue Length [veh]	4.28	3.85	1.35	1.73	11.31	10.68	2.11	5.29	7.23	7.31	7.37	6.81
95th-Percentile Queue Length [ft]	106.96	96.19	33.74	43.24	282.63	267.12	52.71	132.21	180.82	182.79	184.19	170.15

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.56	13.13	12.12	18.04	19.84	20.81	22.07	13.46	14.99	28.34	14.31	14.38
Movement LOS	D	B	B	B	B	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.55			20.00			14.71			17.71		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.50											
Intersection LOS	B											
Intersection V/C	0.586											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	100	690	50	270	800	20	160	870	340	260	420	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	690	50	270	800	20	160	870	340	260	420	40
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	183	13	73	216	5	47	254	99	73	117	11
Total Analysis Volume [veh/h]	106	732	53	291	864	22	187	1015	397	290	469	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	38	0	12	37	0	46	58	0	12	24	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	42	30	30	42	30	30	69	53	53	69	56	56
g / C, Green / Cycle	0.35	0.25	0.25	0.35	0.25	0.25	0.57	0.45	0.45	0.57	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.12	0.21	0.21	0.17	0.23	0.23	0.18	0.38	0.41	0.44	0.14	0.14
s, saturation flow rate [veh/h]	912	1900	1844	1763	1900	1879	1043	1900	1687	660	1900	1834
c, Capacity [veh/h]	263	471	457	621	481	476	606	846	751	319	884	853
d1, Uniform Delay [s]	30.81	42.93	43.01	30.20	43.70	43.74	12.90	29.92	31.13	35.07	19.91	19.93
k, delay calibration	0.04	0.22	0.23	0.14	0.30	0.30	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	8.26	8.92	0.71	17.72	18.34	0.11	11.04	17.40	31.73	0.85	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

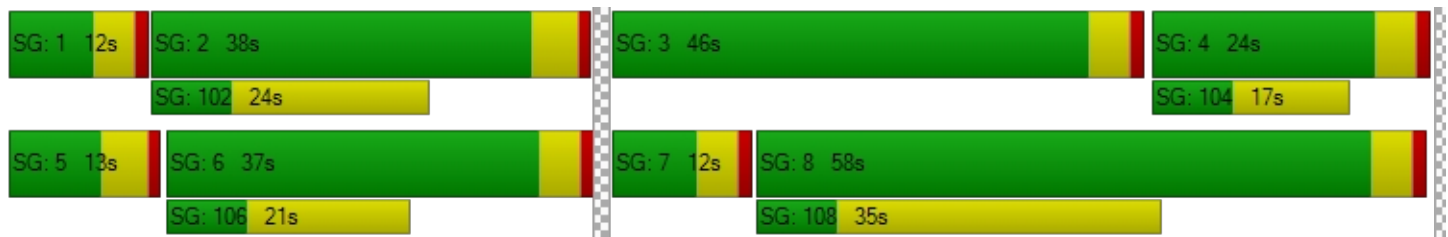
X, volume / capacity	0.40	0.84	0.85	0.47	0.92	0.93	0.31	0.86	0.91	0.91	0.30	0.30
d, Delay for Lane Group [s/veh]	31.18	51.20	51.92	30.91	61.42	62.08	13.01	40.97	48.53	66.80	20.76	20.81
Lane Group LOS	C	D	D	C	E	E	B	D	D	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.30	12.90	12.69	7.12	15.94	15.89	2.39	20.96	21.66	6.75	4.72	4.60
50th-Percentile Queue Length [ft]	57.50	322.43	317.27	177.99	398.45	397.28	59.87	524.06	541.51	168.70	118.10	114.90
95th-Percentile Queue Length [veh]	4.14	18.79	18.53	11.50	22.49	22.43	4.31	28.47	29.29	11.01	8.29	8.11
95th-Percentile Queue Length [ft]	103.51	469.67	463.33	287.39	562.13	560.72	107.76	711.78	732.33	275.20	207.21	202.80

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.18	51.53	51.92	30.91	61.74	62.08	13.01	43.12	48.53	66.80	20.78	20.81
Movement LOS	C	D	D	C	E	E	B	D	D	E	C	C
d_A, Approach Delay [s/veh]	49.13			54.12			40.94			37.38		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	45.40											
Intersection LOS	D											
Intersection V/C	0.801											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	27.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

**Intersection Setup**

Name			20th St		20th St	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	<b>⇐⇐</b>		<b>⇑⇑</b>		<b>⇑⇑</b>	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name			20th St		20th St	
Base Volume Input [veh/h]	740	130	0	840	250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	740	130	0	840	250	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	35	0	237	79	0
Total Analysis Volume [veh/h]	796	140	0	948	315	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.26	0.27	0.26	0.09
s, saturation flow rate [veh/h]	1810	1746	3618	3618
c, Capacity [veh/h]	509	491	2229	2229
d1, Uniform Delay [s]	31.30	31.64	8.97	7.25
k, delay calibration	0.35	0.37	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.73	24.46	0.60	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

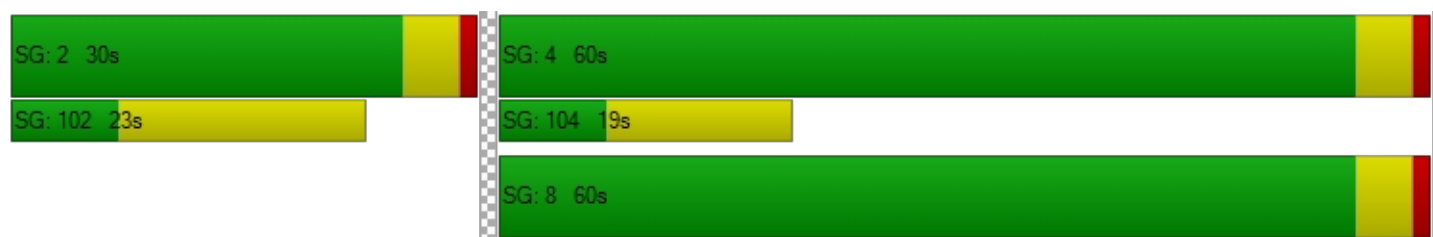
X, volume / capacity	0.92	0.95	0.43	0.14
d, Delay for Lane Group [s/veh]	50.03	56.10	9.56	7.38
Lane Group LOS	D	E	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	11.46	12.20	4.49	1.20
50th-Percentile Queue Length [ft]	286.62	305.05	112.35	29.97
95th-Percentile Queue Length [veh]	17.02	17.93	7.97	2.16
95th-Percentile Queue Length [ft]	425.44	448.26	199.27	53.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.52	56.10	0.00	9.56	7.38	0.00
Movement LOS	D	E		A	A	
d_A, Approach Delay [s/veh]	53.06		9.56		7.38	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	27.76					
Intersection LOS	C					
Intersection V/C	0.529					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.367

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	20	30	850	10	7	350	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	20	30	850	10	7	350	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	6	9	247	3	2	105	9
Total Analysis Volume [veh/h]	42	53	74	12	61	24	35	987	12	8	420	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	67	67	67	67	67
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.04	0.26	0.26	0.12	0.12
s, saturation flow rate [veh/h]	1639	1777	949	1900	1890	1900	1840
c, Capacity [veh/h]	309	325	722	1406	1399	1406	1361
d1, Uniform Delay [s]	35.35	33.70	4.90	4.13	4.13	3.46	3.47
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.19	0.13	0.71	0.71	0.25	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

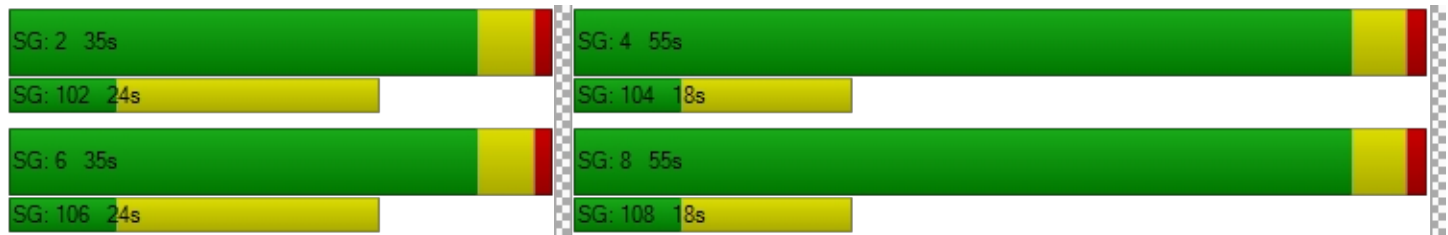
X, volume / capacity	0.55	0.30	0.05	0.36	0.36	0.16	0.17
d, Delay for Lane Group [s/veh]	35.92	33.89	5.03	4.84	4.84	3.70	3.74
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	1.86	0.21	2.73	2.72	1.03	1.04
50th-Percentile Queue Length [ft]	85.19	46.39	5.37	68.30	68.07	25.83	26.03
95th-Percentile Queue Length [veh]	6.13	3.34	0.39	4.92	4.90	1.86	1.87
95th-Percentile Queue Length [ft]	153.35	83.50	9.67	122.93	122.52	46.49	46.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.92	35.92	35.92	33.89	33.89	33.89	5.03	4.84	4.84	0.00	3.72	3.74
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.92			33.89			4.84			3.72		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.15											
Intersection LOS	A											
Intersection V/C	0.367											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.605

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	630	30	70	750	280	60	330	60	240	160	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	630	30	70	750	280	60	330	60	240	160	40
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	191	9	19	201	75	17	95	17	68	45	11
Total Analysis Volume [veh/h]	109	764	36	75	803	300	69	379	69	272	181	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	45	37	37	45	36	36	20	20	20	36	36	45
g / C, Green / Cycle	0.50	0.41	0.41	0.50	0.40	0.40	0.22	0.22	0.22	0.40	0.40	0.50
(v / s)_j Volume / Saturation Flow Rate	0.15	0.21	0.22	0.09	0.30	0.33	0.06	0.12	0.13	0.21	0.10	0.03
s, saturation flow rate [veh/h]	728	1900	1845	841	1900	1593	1171	1900	1745	1297	1900	1519
c, Capacity [veh/h]	326	779	756	425	752	631	234	413	380	529	758	763
d1, Uniform Delay [s]	17.28	19.93	20.00	13.18	23.62	24.56	36.11	31.37	31.56	19.97	17.99	11.52
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.75	2.45	2.60	0.07	7.35	12.32	0.26	0.43	0.52	0.29	0.06	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

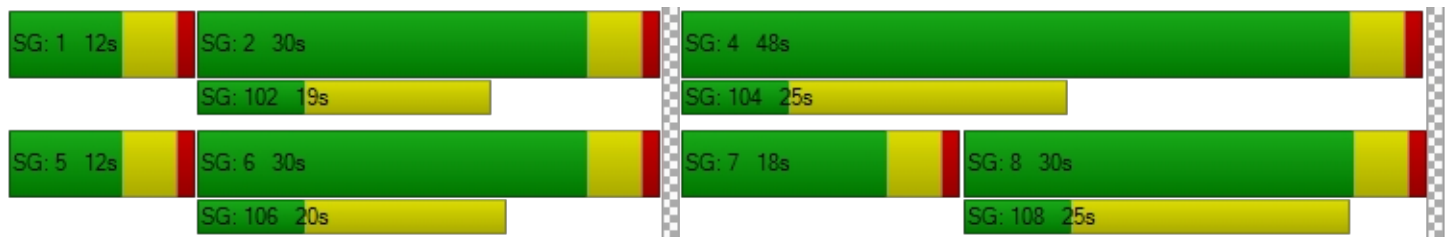
X, volume / capacity	0.33	0.52	0.52	0.18	0.77	0.83	0.29	0.55	0.58	0.51	0.24	0.06
d, Delay for Lane Group [s/veh]	20.02	22.38	22.60	13.26	30.97	36.88	36.36	31.80	32.08	20.26	18.05	11.53
Lane Group LOS	C	C	C	B	C	D	D	C	C	C	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.34	6.48	6.43	0.75	11.46	11.57	1.38	4.33	4.18	3.94	2.45	0.45
50th-Percentile Queue Length [ft]	33.51	162.12	160.71	18.63	286.52	289.33	34.54	108.29	104.59	98.42	61.16	11.19
95th-Percentile Queue Length [veh]	2.41	10.66	10.59	1.34	17.01	17.15	2.49	7.74	7.53	7.09	4.40	0.81
95th-Percentile Queue Length [ft]	60.32	266.53	264.66	33.53	425.32	428.81	62.17	193.62	188.26	177.16	110.09	20.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.02	22.48	22.60	13.26	32.63	36.88	36.36	31.91	32.08	20.26	18.05	11.53
Movement LOS	C	C	C	B	C	D	D	C	C	C	B	B
d_A, Approach Delay [s/veh]	22.19			32.48			32.53			18.67		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	27.26											
Intersection LOS	C											
Intersection V/C	0.605											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	30	1010	60	40	1150	20	70	60	40	30	160	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1010	60	40	1150	20	70	60	40	30	160	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	268	16	11	317	6	22	19	13	10	51	10
Total Analysis Volume [veh/h]	32	1073	64	44	1269	22	88	75	50	38	204	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	52	52	52	52	52	52	19	19
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.30	0.09	0.34	0.34	0.19	0.16
s, saturation flow rate [veh/h]	434	1900	1853	502	1900	1887	1123	1705
c, Capacity [veh/h]	287	1240	1209	332	1240	1231	325	448
d1, Uniform Delay [s]	12.88	6.92	6.94	11.79	7.33	7.34	28.80	27.87
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	1.25	1.29	0.83	1.58	1.59	0.84	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

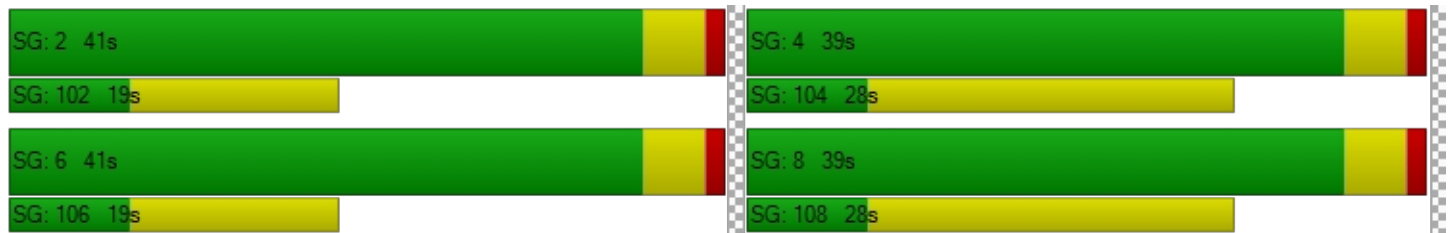
X, volume / capacity	0.11	0.46	0.47	0.13	0.52	0.52	0.66	0.63
d, Delay for Lane Group [s/veh]	13.67	8.17	8.23	12.61	8.90	8.93	29.64	28.40
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.37	4.23	4.17	0.48	5.08	5.06	3.81	4.70
50th-Percentile Queue Length [ft]	9.37	105.70	104.28	12.06	126.92	126.49	95.21	117.41
95th-Percentile Queue Length [veh]	0.67	7.60	7.51	0.87	8.77	8.75	6.86	8.25
95th-Percentile Queue Length [ft]	16.86	190.01	187.71	21.70	219.30	218.71	171.38	206.26

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.67	8.20	8.23	12.61	8.92	8.93	29.64	29.64	29.64	28.40	28.40	28.40
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.35			9.04			29.64			28.40		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.04											
Intersection LOS	B											
Intersection V/C	0.531											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	90	960	20	40	1250	90	210	10	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	90	960	20	40	1250	90	210	10	140
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	248	5	11	339	24	64	3	43
Total Analysis Volume [veh/h]	0	0	0	93	993	21	43	1357	98	257	12	172
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	90	90	90	90	90	90	20	20
g / C, Green / Cycle	0.75	0.75	0.75	0.75	0.75	0.75	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.25	0.27	0.27	0.08	0.39	0.39	0.15	0.11
s, saturation flow rate [veh/h]	371	1900	1881	564	1900	1849	1757	1555
c, Capacity [veh/h]	275	1433	1419	424	1433	1395	297	263
d1, Uniform Delay [s]	14.21	4.94	4.94	8.20	5.89	5.93	48.85	46.51
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.12	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.31	0.69	0.70	0.48	1.31	1.37	11.46	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.36	0.36	0.10	0.51	0.52	0.91	0.66
d, Delay for Lane Group [s/veh]	17.53	5.63	5.64	8.67	7.20	7.30	60.31	47.55
Lane Group LOS	B	A	A	A	A	A	E	D
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.64	3.97	3.94	0.48	7.14	7.08	8.74	4.82
50th-Percentile Queue Length [ft]	40.97	99.13	98.59	12.11	178.45	177.03	218.58	120.60
95th-Percentile Queue Length [veh]	2.95	7.14	7.10	0.87	11.52	11.45	13.59	8.43
95th-Percentile Queue Length [ft]	73.74	178.43	177.46	21.79	288.00	286.13	339.82	210.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	17.53	5.63	5.64	8.67	7.25	7.30	60.31	60.31	47.55
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			6.63			7.29			55.33		
Approach LOS	A			A			A			E		
d_I, Intersection Delay [s/veh]	14.01											
Intersection LOS	B											
Intersection V/C	0.543											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	890	60	120	980	20	230	10	230	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	890	60	120	980	20	230	10	230	10	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	239	16	31	252	5	64	3	64	4	4	4
Total Analysis Volume [veh/h]	11	955	64	123	1008	21	258	11	258	16	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	67	67	79	79	79	22	22	6
g / C, Green / Cycle	0.56	0.56	0.66	0.66	0.66	0.18	0.18	0.05
(v / s)_j Volume / Saturation Flow Rate	0.29	0.29	0.17	0.27	0.27	0.15	0.16	0.03
s, saturation flow rate [veh/h]	1865	1671	713	1900	1884	1813	1578	1767
c, Capacity [veh/h]	1077	937	453	1248	1238	328	286	83
d1, Uniform Delay [s]	16.14	16.34	10.25	9.68	9.69	47.23	48.08	56.01
k, delay calibration	0.50	0.50	0.41	0.50	0.50	0.04	0.08	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.67	2.08	1.20	1.01	1.02	1.95	8.37	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

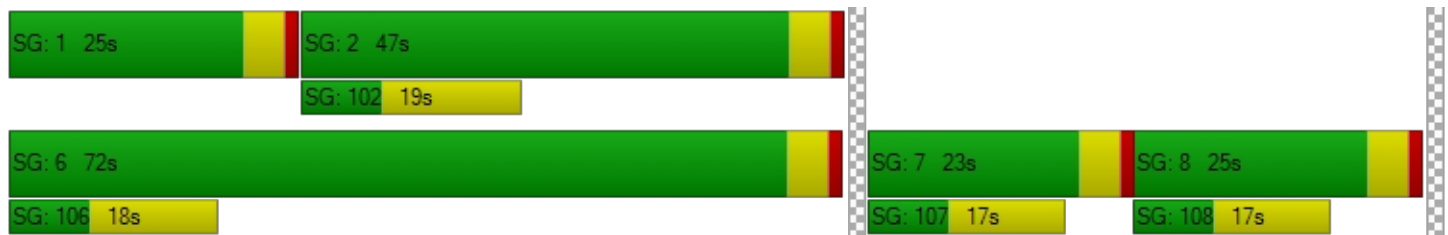
X, volume / capacity	0.50	0.52	0.27	0.41	0.41	0.82	0.90	0.58
d, Delay for Lane Group [s/veh]	17.81	18.42	11.46	10.70	10.71	49.18	56.45	58.39
Lane Group LOS	B	B	B	B	B	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.19	8.51	1.25	6.25	6.21	7.96	8.26	1.47
50th-Percentile Queue Length [ft]	229.74	212.87	31.22	156.16	155.26	198.93	206.50	36.72
95th-Percentile Queue Length [veh]	14.16	13.30	2.25	10.35	10.30	12.58	12.97	2.64
95th-Percentile Queue Length [ft]	354.03	332.50	56.20	258.63	257.44	314.59	324.34	66.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.81	18.08	18.42	11.46	10.70	10.71	49.18	49.18	56.45	58.39	58.39	58.39
Movement LOS	B	B	B	B	B	B	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	18.10			10.78			52.74			58.39		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	22.37											
Intersection LOS	C											
Intersection V/C	0.512											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	570	60	120	700	10	160	430	210	0	180	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	570	60	120	700	10	160	430	210	0	180	40
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	148	16	33	191	3	42	113	55	0	48	11
Total Analysis Volume [veh/h]	0	590	62	131	764	11	168	452	221	0	192	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.35	0.14	0.41	0.14	0.38	0.00	0.10	0.03
s, saturation flow rate [veh/h]	1858	946	1894	1208	1784	777	1900	1560
c, Capacity [veh/h]	842	413	1061	369	602	80	641	526
d1, Uniform Delay [s]	20.70	14.20	14.72	30.23	29.80	0.00	21.97	20.31
k, delay calibration	0.50	0.23	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.86	0.93	4.43	0.33	73.69	0.00	0.10	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

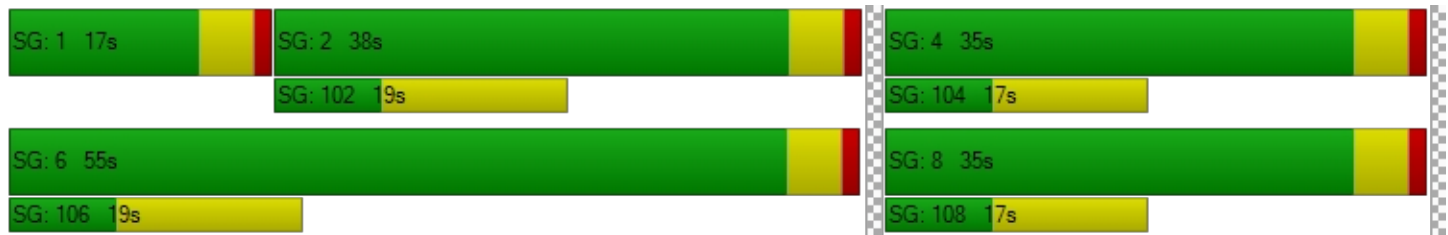
X, volume / capacity	0.77	0.32	0.73	0.46	1.12	0.00	0.30	0.08
d, Delay for Lane Group [s/veh]	27.55	15.13	19.14	30.56	103.49	0.00	22.06	20.33
Lane Group LOS	C	B	B	C	F	A	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	12.20	1.19	11.35	3.18	24.73	0.00	2.99	0.62
50th-Percentile Queue Length [ft]	304.92	29.70	283.68	79.49	618.36	0.00	74.64	15.45
95th-Percentile Queue Length [veh]	17.92	2.14	16.87	5.72	35.35	0.00	5.37	1.11
95th-Percentile Queue Length [ft]	448.10	53.46	421.79	143.08	883.81	0.00	134.35	27.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.55	27.55	15.13	19.14	19.14	30.56	103.49	103.49	0.00	22.06	20.33
Movement LOS		C	C	B	B	B	C	F	F	A	C	C
d_A, Approach Delay [s/veh]		27.55		18.56			88.92			21.75		
Approach LOS		C		B			F			C		
d_I, Intersection Delay [s/veh]	43.54											
Intersection LOS	D											
Intersection V/C	0.786											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	580	470	10	20	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	580	470	10	20	20
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	158	124	3	9	9
Total Analysis Volume [veh/h]	22	633	494	11	36	36
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	2
g / C, Green / Cycle	0.43	0.43	0.43	0.12
(v / s)_j Volume / Saturation Flow Rate	0.02	0.33	0.27	0.04
s, saturation flow rate [veh/h]	887	1900	1888	1707
c, Capacity [veh/h]	471	822	817	207
d1, Uniform Delay [s]	7.86	4.98	4.53	8.31
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.59	0.29	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

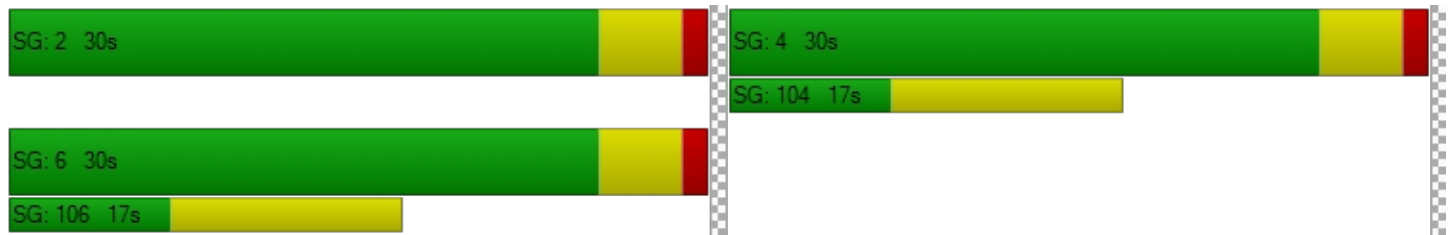
X, volume / capacity	0.05	0.77	0.62	0.35
d, Delay for Lane Group [s/veh]	7.88	5.56	4.82	8.68
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.68	0.46	0.17
50th-Percentile Queue Length [ft]	1.32	16.95	11.51	4.17
95th-Percentile Queue Length [veh]	0.10	1.22	0.83	0.30
95th-Percentile Queue Length [ft]	2.38	30.51	20.71	7.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.88	5.56	4.82	4.82	8.68	8.68
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.64		4.82		8.68	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.48					
Intersection LOS	A					
Intersection V/C	0.375					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	750	410	100	1030	480	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	750	410	100	1030	480	120
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	198	108	27	279	128	32
Total Analysis Volume [veh/h]	790	432	108	1117	513	128
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	77	77	9	91	20	20
g / C, Green / Cycle	0.64	0.64	0.07	0.76	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.32	0.37	0.06	0.31	0.15	0.09
s, saturation flow rate [veh/h]	1900	1655	1810	3618	3514	1460
c, Capacity [veh/h]	1226	1067	134	2739	583	242
d1, Uniform Delay [s]	11.13	11.97	54.68	5.11	48.82	45.69
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.45	2.23	4.36	0.45	1.75	0.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.57	0.81	0.41	0.88	0.53
d, Delay for Lane Group [s/veh]	12.58	14.20	59.04	5.56	50.56	46.36
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	8.76	9.55	3.37	4.38	7.62	3.54
50th-Percentile Queue Length [ft]	218.92	238.72	84.36	109.53	190.46	88.43
95th-Percentile Queue Length [veh]	13.61	14.62	6.07	7.81	12.14	6.37
95th-Percentile Queue Length [ft]	340.24	365.41	151.84	195.35	303.62	159.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.95	14.20	59.04	5.56	50.56	46.36
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	13.39		10.28		49.72	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	19.70					
Intersection LOS	B					
Intersection V/C	0.575					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.542

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	340	170	70	310	70	490	350	40	60	610	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	340	170	70	310	70	490	350	40	60	610	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	92	46	20	88	20	126	90	10	16	163	3
Total Analysis Volume [veh/h]	65	366	183	80	353	80	505	361	41	64	653	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	25	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.06	0.19	0.12	0.08	0.19	0.05	0.45	0.11	0.11	0.07	0.18	0.18
s, saturation flow rate [veh/h]	1034	1900	1523	1014	1900	1555	1132	1900	1788	963	1900	1876
c, Capacity [veh/h]	396	840	673	384	840	687	510	812	764	250	482	476
d1, Uniform Delay [s]	19.24	13.55	12.44	19.90	13.44	11.54	27.93	12.92	12.96	26.99	23.71	23.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.46	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	1.65	1.00	1.23	1.55	0.34	36.23	0.06	0.07	0.20	0.66	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

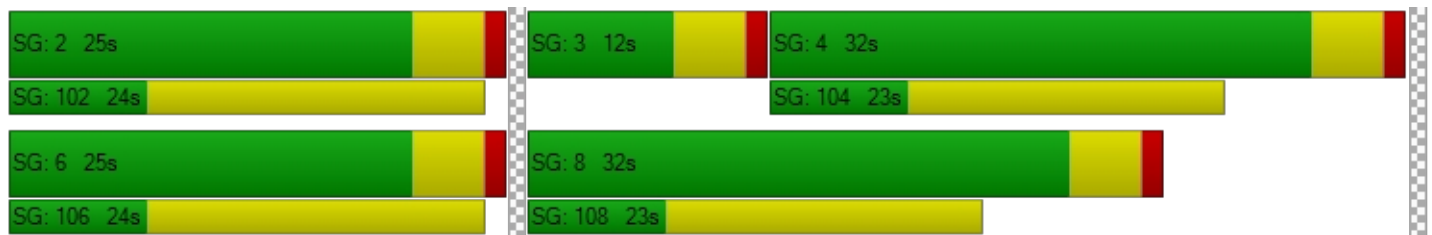
X, volume / capacity	0.16	0.44	0.27	0.21	0.42	0.12	0.99	0.25	0.26	0.26	0.69	0.70
d, Delay for Lane Group [s/veh]	20.13	15.20	13.43	21.13	14.98	11.88	64.15	12.98	13.03	27.18	24.38	24.44
Lane Group LOS	C	B	B	C	B	B	E	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.85	3.89	1.80	1.08	3.72	0.72	10.94	1.92	1.86	0.95	4.80	4.78
50th-Percentile Queue Length [ft]	21.23	97.31	44.90	27.04	92.90	17.96	273.62	47.93	46.40	23.69	119.88	119.48
95th-Percentile Queue Length [veh]	1.53	7.01	3.23	1.95	6.69	1.29	16.37	3.45	3.34	1.71	8.39	8.36
95th-Percentile Queue Length [ft]	38.21	175.16	80.82	48.68	167.23	32.34	409.26	86.27	83.53	42.65	209.66	209.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.13	15.20	13.43	21.13	14.98	11.88	64.15	13.00	13.03	27.18	24.41	24.44
Movement LOS	C	B	B	C	B	B	E	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.19			15.46			41.48			24.65		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	26.37											
Intersection LOS	C											
Intersection V/C	0.542											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.666

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	340	350	80	560	140	370	840	70	10	730	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	340	350	80	560	140	370	840	70	10	730	40
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	91	94	24	166	42	94	214	18	3	192	11
Total Analysis Volume [veh/h]	54	365	376	95	665	166	377	856	71	11	770	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	28	60	8	30	30	15	64	76	2	51	51
g / C, Green / Cycle	0.05	0.23	0.50	0.06	0.25	0.25	0.13	0.53	0.63	0.02	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.03	0.10	0.25	0.03	0.23	0.23	0.11	0.24	0.05	0.01	0.22	0.22
s, saturation flow rate [veh/h]	1810	3618	1506	2796	1900	1726	3514	3618	1557	1810	1900	1855
c, Capacity [veh/h]	88	848	756	191	475	432	445	1916	985	33	800	781
d1, Uniform Delay [s]	55.96	39.10	19.81	56.43	43.60	43.93	51.26	17.38	8.49	58.21	25.63	25.68
k, delay calibration	0.04	0.04	0.22	0.04	0.14	0.16	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.13	1.05	0.75	8.47	12.23	1.76	0.76	0.01	2.24	2.34	2.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.43	0.50	0.50	0.90	0.93	0.85	0.45	0.07	0.34	0.51	0.52
d, Delay for Lane Group [s/veh]	58.50	39.23	20.86	57.18	52.07	56.17	53.02	18.14	8.50	60.45	27.97	28.10
Lane Group LOS	E	D	C	E	D	E	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.61	7.09	1.44	13.41	13.01	5.65	7.37	0.70	0.35	9.09	8.96
50th-Percentile Queue Length [ft]	41.67	115.29	177.23	35.99	335.24	325.28	141.17	184.31	17.47	8.77	227.23	223.96
95th-Percentile Queue Length [veh]	3.00	8.13	11.46	2.59	19.41	18.93	9.54	11.83	1.26	0.63	14.03	13.87
95th-Percentile Queue Length [ft]	75.00	203.33	286.40	64.78	485.37	473.17	238.60	295.63	31.44	15.78	350.84	346.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	39.23	20.86	57.18	53.52	56.17	53.02	18.14	8.50	60.45	28.03	28.10
Movement LOS	E	D	C	E	D	E	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	31.85			54.37			27.70			28.47		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	35.14											
Intersection LOS	D											
Intersection V/C	0.666											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T			T			T			T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	850	280	270	820	100	90	1260	10	140	850	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	850	280	270	820	100	90	1260	10	140	850	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	223	73	79	241	29	24	341	3	38	233	5
Total Analysis Volume [veh/h]	115	891	294	317	962	117	97	1365	11	154	932	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	33	33	13	36	36	5	49	49	7	51	51
g / C, Green / Cycle	0.08	0.27	0.27	0.11	0.30	0.30	0.04	0.41	0.41	0.06	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.20	0.09	0.27	0.08	0.03	0.25	0.25	0.04	0.17	0.17
s, saturation flow rate [veh/h]	1810	3618	1505	3514	3618	1524	3514	3618	1889	3514	3618	1872
c, Capacity [veh/h]	141	989	411	373	1092	460	151	1471	768	213	1534	794
d1, Uniform Delay [s]	54.46	42.01	39.35	52.65	39.82	31.66	56.46	28.14	28.15	55.35	24.07	24.09
k, delay calibration	0.04	0.15	0.31	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	4.64	6.38	2.12	3.53	0.41	1.68	1.93	3.67	1.76	0.07	0.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.90	0.71	0.85	0.88	0.25	0.64	0.61	0.62	0.72	0.41	0.41
d, Delay for Lane Group [s/veh]	58.86	46.65	45.73	54.77	43.35	32.07	58.14	30.06	31.82	57.11	24.13	24.62
Lane Group LOS	E	D	D	D	D	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	14.03	9.01	4.68	13.44	2.55	1.48	10.56	11.43	2.34	6.21	6.56
50th-Percentile Queue Length [ft]	93.91	350.85	225.25	116.93	335.92	63.69	37.06	264.07	285.65	58.53	155.22	163.96
95th-Percentile Queue Length [veh]	6.76	20.18	13.93	8.22	19.45	4.59	2.67	15.89	16.97	4.21	10.30	10.76
95th-Percentile Queue Length [ft]	169.04	504.44	348.32	205.60	486.21	114.64	66.70	397.32	424.24	105.35	257.38	268.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	46.65	45.73	54.77	43.35	32.07	58.14	30.66	31.82	57.11	24.29	24.62
Movement LOS	E	D	D	D	D	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	47.52			45.00			32.47			28.86		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	38.73											
Intersection LOS	D											
Intersection V/C	0.630											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.568

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	160	20	180	30	10	60	130	1590	70	70	1290	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	20	180	30	10	60	130	1590	70	70	1290	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	8	68	9	3	17	33	401	18	20	378	44
Total Analysis Volume [veh/h]	243	30	273	34	11	69	131	1604	71	82	1510	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	10	68	68	7	64	64
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.09	0.57	0.57	0.06	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.18	0.02	0.17	0.02	0.05	0.07	0.31	0.31	0.05	0.31	0.31
s, saturation flow rate [veh/h]	1326	1900	1609	1398	1594	1810	3618	1854	1810	3618	1796
c, Capacity [veh/h]	323	496	420	376	416	158	2050	1050	104	1942	964
d1, Uniform Delay [s]	47.18	33.27	39.44	36.83	34.48	53.85	16.22	16.25	55.78	18.65	18.69
k, delay calibration	0.11	0.04	0.07	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.67	0.02	1.15	0.10	0.22	4.26	1.02	2.01	4.93	1.27	2.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

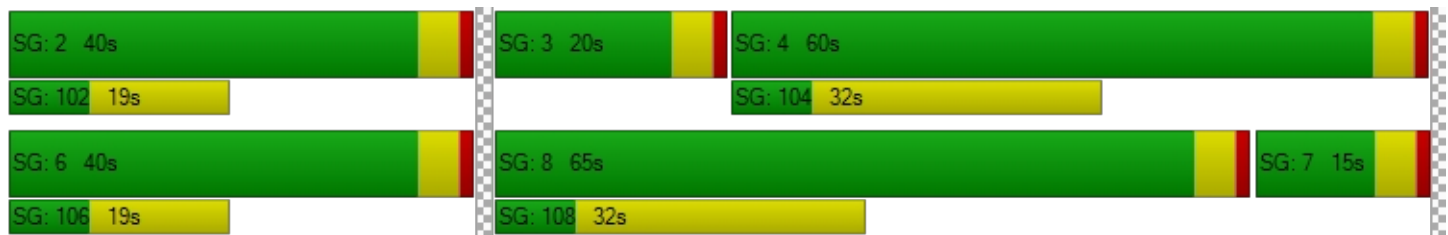
X, volume / capacity	0.75	0.06	0.65	0.09	0.19	0.83	0.54	0.54	0.79	0.58	0.58
d, Delay for Lane Group [s/veh]	50.85	33.29	40.58	36.94	34.70	58.11	17.24	18.25	60.70	19.92	21.26
Lane Group LOS	D	C	D	D	C	E	B	B	E	B	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.35	0.66	7.20	0.80	1.84	4.07	9.51	10.09	2.59	10.60	10.94
50th-Percentile Queue Length [ft]	183.64	16.45	180.02	20.02	45.91	101.85	237.74	252.19	64.79	264.94	273.49
95th-Percentile Queue Length [veh]	11.79	1.18	11.60	1.44	3.31	7.33	14.57	15.30	4.67	15.94	16.36
95th-Percentile Queue Length [ft]	294.76	29.60	290.04	36.03	82.63	183.33	364.17	382.40	116.63	398.41	409.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	50.85	33.29	40.58	36.94	34.70	34.70	58.11	17.56	18.25	60.70	20.26	21.26
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	44.75			35.37			20.52			22.24		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	24.76											
Intersection LOS	C											
Intersection V/C	0.568											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	410	1330	520	0	0	1510
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	410	1330	520	0	0	1510
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	348	140	0	0	417
Total Analysis Volume [veh/h]	429	1391	562	0	0	1669
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	90	21	75
g / C, Green / Cycle	0.29	0.75	0.18	0.63
(v / s)_j Volume / Saturation Flow Rate	0.12	0.77	0.16	0.24
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1344	638	4336
d1, Uniform Delay [s]	33.95	15.18	48.16	10.93
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	33.97	1.62	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

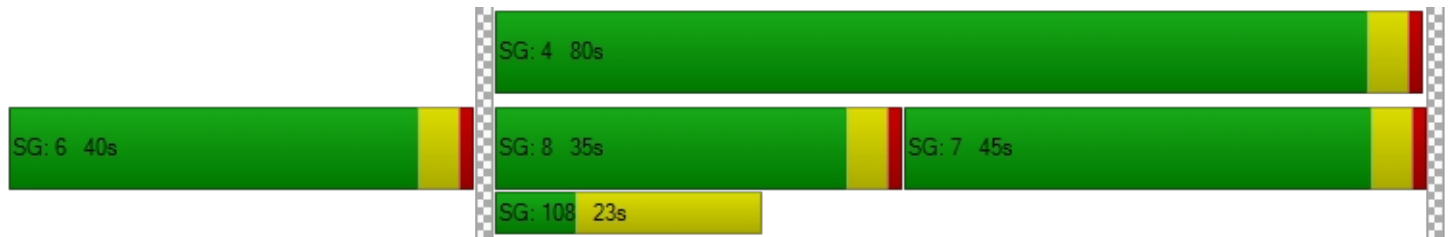
X, volume / capacity	0.41	1.03	0.88	0.38
d, Delay for Lane Group [s/veh]	34.05	49.15	49.77	11.19
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.77	18.07	8.31	5.31
50th-Percentile Queue Length [ft]	119.30	451.74	207.84	132.69
95th-Percentile Queue Length [veh]	8.35	25.78	13.04	9.09
95th-Percentile Queue Length [ft]	208.87	644.61	326.06	227.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.05	49.15	49.77	0.00	0.00	11.19
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	45.59		49.77		11.19	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	32.00					
Intersection LOS	C					
Intersection V/C	0.476					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	520	270	1200	730	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	520	270	1200	730	19
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	144	75	318	194	5
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	576	299	1274	775	20
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			25	25	86	115	115
g / C, Green / Cycle			0.21	0.21	0.71	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.16	0.19	0.36	0.21	0.21
s, saturation flow rate [veh/h]			3618	1569	3514	1900	1883
c, Capacity [veh/h]			756	328	2510	1827	1811
d1, Uniform Delay [s]			44.60	46.33	7.68	0.11	0.11
k, delay calibration			0.04	0.13	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.61	11.68	0.74	0.27	0.28
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity			0.76	0.91	0.51	0.22	0.22
d, Delay for Lane Group [s/veh]			45.21	58.01	8.42	0.39	0.39
Lane Group LOS			D	E	A	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			8.10	9.73	6.90	0.14	0.14
50th-Percentile Queue Length [ft]			202.50	243.27	172.45	3.47	3.51
95th-Percentile Queue Length [veh]			12.77	14.85	11.21	0.25	0.25
95th-Percentile Queue Length [ft]			319.19	371.16	280.13	6.25	6.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.21	58.01	8.42	0.39	0.39
Movement LOS								D	E	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.58			5.33		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	18.49											
Intersection LOS	B											
Intersection V/C	0.553											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.396

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	└			+								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	30	720	28	40	700	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	30	720	28	40	700	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	8	197	8	13	221	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	33	789	30	50	884	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.24	0.24	0.28	0.28
s, saturation flow rate [veh/h]	1560	1380	1696	1729	1644	1729
c, Capacity [veh/h]	274	280	1300	1292	1262	1292
d1, Uniform Delay [s]	43.47	46.24	4.87	5.03	5.03	5.28
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.63	0.66	0.80	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

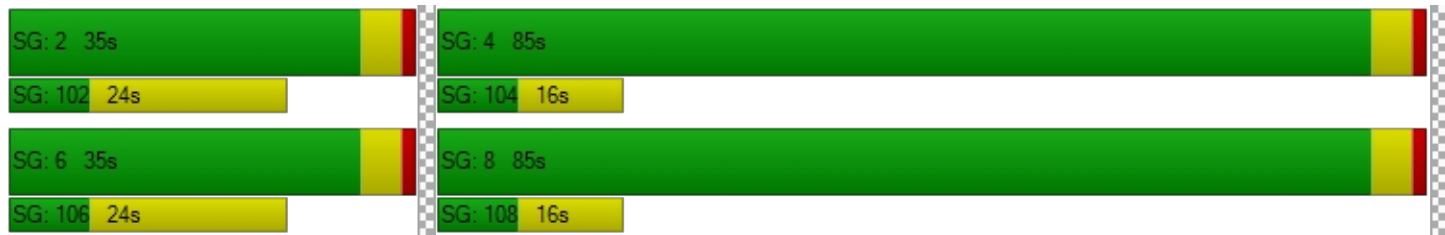
X, volume / capacity	0.36	0.59	0.31	0.32	0.36	0.37
d, Delay for Lane Group [s/veh]	43.77	46.97	5.50	5.68	5.83	6.10
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.10	3.25	3.59	3.95
50th-Percentile Queue Length [ft]	65.58	115.83	77.40	81.26	89.80	98.85
95th-Percentile Queue Length [veh]	4.72	8.16	5.57	5.85	6.47	7.12
95th-Percentile Queue Length [ft]	118.04	204.08	139.33	146.27	161.65	177.92

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.50	5.59	0.00	5.83	5.98	6.10
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]	43.77			46.97			5.59			5.97		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	11.02											
Intersection LOS	B											
Intersection V/C	0.396											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	340	760	20	20	750	100	10	280	40	130	120	350
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	340	760	20	20	750	100	10	280	40	130	120	350
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	88	196	5	6	212	28	3	76	11	37	35	101
Total Analysis Volume [veh/h]	351	785	21	23	847	113	11	302	43	150	138	403
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	38	66	66	3	30	30	24	24	24	38	38	80
g / C, Green / Cycle	0.32	0.55	0.55	0.02	0.25	0.25	0.20	0.20	0.20	0.32	0.32	0.67
(v / s)_j Volume / Saturation Flow Rate	0.10	0.21	0.21	0.01	0.26	0.26	0.01	0.16	0.03	0.11	0.07	0.26
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1791	1251	1900	1480	1321	1900	1573
c, Capacity [veh/h]	1111	1039	1024	42	482	454	222	377	294	343	599	1054
d1, Uniform Delay [s]	31.15	15.66	15.69	57.96	44.76	44.76	45.83	45.77	39.65	32.21	30.31	8.79
k, delay calibration	0.50	0.50	0.50	0.04	0.44	0.46	0.04	0.11	0.04	0.04	0.04	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.75	1.10	1.13	4.16	42.97	49.79	0.03	4.05	0.08	0.33	0.07	0.38
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

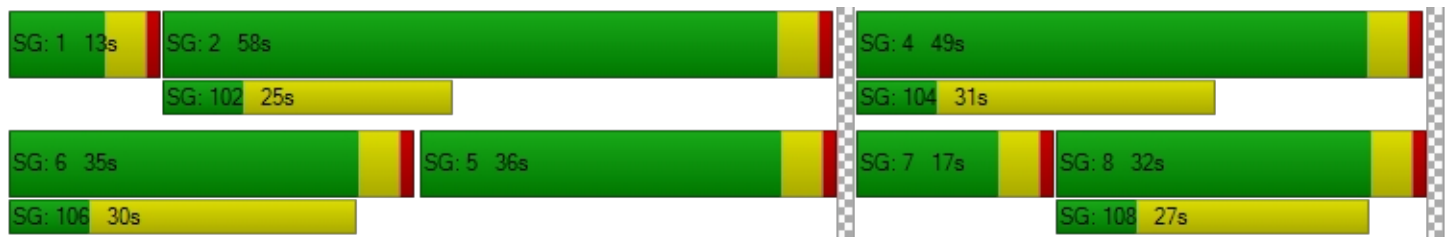
X, volume / capacity	0.32	0.39	0.39	0.55	1.02	1.04	0.05	0.80	0.15	0.44	0.23	0.38
d, Delay for Lane Group [s/veh]	31.90	16.76	16.81	62.12	87.73	94.54	45.87	49.82	39.73	32.54	30.38	9.17
Lane Group LOS	C	B	B	E	F	F	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.95	6.48	6.44	0.73	19.79	19.52	0.29	8.90	1.05	3.29	2.98	4.51
50th-Percentile Queue Length [ft]	98.77	162.05	160.99	18.36	494.83	487.93	7.24	222.38	26.29	82.28	74.45	112.73
95th-Percentile Queue Length [veh]	7.11	10.66	10.60	1.32	27.38	27.33	0.52	13.79	1.89	5.92	5.36	7.99
95th-Percentile Queue Length [ft]	177.78	266.44	265.04	33.05	684.45	683.33	13.03	344.67	47.32	148.10	134.01	199.79

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.90	16.79	16.81	62.12	90.60	94.54	45.87	49.82	39.73	32.54	30.38	9.17
Movement LOS	C	B	B	E	F	F	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.37			90.39			48.48			18.48		
Approach LOS	C			F			D			B		
d_I, Intersection Delay [s/veh]	45.06											
Intersection LOS	D											
Intersection V/C	0.658											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	200	610	760	50	70	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	200	610	760	50	70	50
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	159	197	13	20	14
Total Analysis Volume [veh/h]	209	638	789	52	79	56
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.72	0.72	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.26	0.34	0.42	0.03	0.04	0.04
s, saturation flow rate [veh/h]	812	1900	1900	1588	1810	1416
c, Capacity [veh/h]	637	1561	1358	1135	137	108
d1, Uniform Delay [s]	4.60	2.15	6.25	3.78	40.17	40.00
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.79	1.82	0.08	1.41	1.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

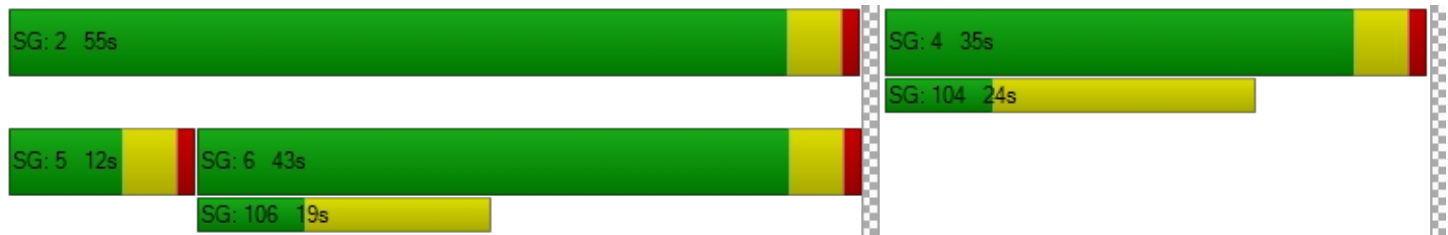
X, volume / capacity	0.33	0.41	0.58	0.05	0.58	0.52
d, Delay for Lane Group [s/veh]	5.98	2.94	8.07	3.86	41.58	41.45
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.50	1.41	5.78	0.23	1.71	1.21
50th-Percentile Queue Length [ft]	12.60	35.15	144.38	5.67	42.65	30.23
95th-Percentile Queue Length [veh]	0.91	2.53	9.72	0.41	3.07	2.18
95th-Percentile Queue Length [ft]	22.68	63.28	242.91	10.20	76.77	54.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.98	2.94	8.07	3.86	41.58	41.45
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.69		7.81		41.53	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.39					
Intersection LOS	A					
Intersection V/C	0.489					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	100	860	90	140	830	180	90	150	120	290	250	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	860	90	140	830	180	90	150	120	290	250	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	224	23	36	215	47	24	40	32	95	82	49
Total Analysis Volume [veh/h]	104	898	94	145	859	186	96	160	128	381	329	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	52	52	11	31	31	13	13	13	25	25	25
g / C, Green / Cycle	0.27	0.43	0.43	0.10	0.26	0.26	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.06	0.08	0.24	0.12	0.05	0.08	0.09	0.21	0.17	0.13
s, saturation flow rate [veh/h]	1810	3618	1547	1810	3618	1544	1810	1900	1439	1810	1900	1544
c, Capacity [veh/h]	490	1560	667	174	930	397	195	204	155	383	402	327
d1, Uniform Delay [s]	33.91	25.85	20.69	53.33	43.49	37.71	50.52	52.24	52.51	47.28	45.15	42.79
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	1.55	0.44	3.90	1.80	0.32	0.72	2.48	4.21	33.95	6.24	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.58	0.14	0.83	0.92	0.47	0.49	0.78	0.83	0.99	0.82	0.60
d, Delay for Lane Group [s/veh]	34.90	27.41	21.13	57.23	45.29	38.03	51.24	54.71	56.71	81.23	51.39	43.46
Lane Group LOS	C	C	C	E	D	D	D	D	E	F	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.47	9.79	1.67	4.70	13.33	4.95	2.74	4.80	3.93	14.80	9.92	5.30
50th-Percentile Queue Length [ft]	61.84	244.82	41.66	117.50	333.21	123.81	68.55	119.98	98.18	370.02	248.05	132.39
95th-Percentile Queue Length [veh]	4.45	14.92	3.00	8.26	19.32	8.60	4.94	8.39	7.07	21.11	15.09	9.07
95th-Percentile Queue Length [ft]	111.31	373.12	74.99	206.39	482.89	215.05	123.39	209.80	176.72	527.75	377.19	226.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.90	27.41	21.13	57.23	45.29	38.03	51.24	54.71	56.71	81.23	51.39	43.46
Movement LOS	C	C	C	E	D	D	D	D	E	F	D	D
d_A, Approach Delay [s/veh]	27.58			45.61			54.51			62.20		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	45.25											
Intersection LOS	D											
Intersection V/C	0.628											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.569

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	60	450	90	50	340	50	70	400	40	100	450	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	450	90	50	340	50	70	400	40	100	450	70
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	118	24	14	93	14	21	117	12	27	123	19
Total Analysis Volume [veh/h]	63	471	94	55	374	55	82	469	47	109	490	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.06	0.31	0.06	0.23	0.09	0.25	0.03	0.12	0.26	0.05
s, saturation flow rate [veh/h]	972	1818	858	1856	920	1900	1560	937	1900	1563
c, Capacity [veh/h]	381	837	281	855	246	734	602	260	734	604
d1, Uniform Delay [s]	17.19	12.67	21.17	11.36	24.55	15.02	11.66	24.59	15.24	11.89
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.93	4.33	1.55	2.10	0.29	0.35	0.02	0.40	0.39	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

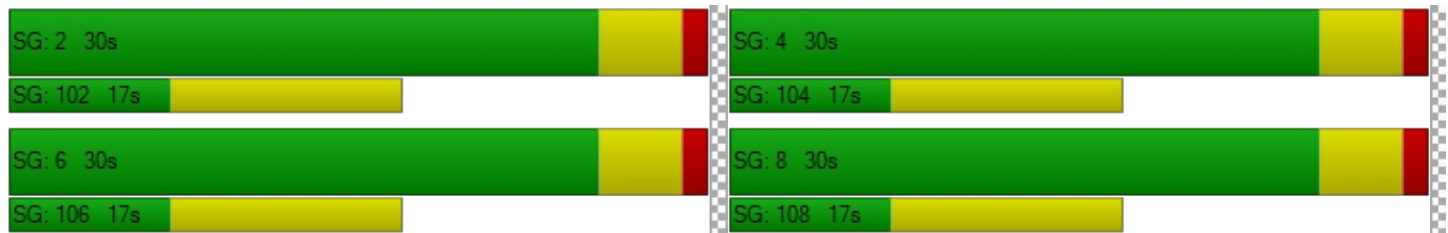
X, volume / capacity	0.17	0.67	0.20	0.50	0.33	0.64	0.08	0.42	0.67	0.13
d, Delay for Lane Group [s/veh]	18.12	17.00	22.72	13.46	24.84	15.37	11.68	24.99	15.64	11.93
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.74	6.21	0.75	3.92	1.03	4.50	0.35	1.39	4.77	0.57
50th-Percentile Queue Length [ft]	18.57	155.31	18.72	97.89	25.86	112.45	8.70	34.83	119.36	14.34
95th-Percentile Queue Length [veh]	1.34	10.30	1.35	7.05	1.86	7.98	0.63	2.51	8.36	1.03
95th-Percentile Queue Length [ft]	33.42	257.50	33.69	176.20	46.54	199.40	15.66	62.70	208.95	25.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.12	17.00	17.00	22.72	13.46	13.46	24.84	15.37	11.68	24.99	15.64	11.93
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.11			14.51			16.38			16.73		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.29											
Intersection LOS	B											
Intersection V/C	0.569											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.691

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	960	50	140	1120	80	90	400	30	140	480	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	960	50	140	1120	80	90	400	30	140	480	80
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	267	14	37	294	21	25	112	8	40	138	23
Total Analysis Volume [veh/h]	67	1070	56	147	1178	84	101	449	34	162	554	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	63	51	51	63	52	52	48	35	35	48	37	37
g / C, Green / Cycle	0.52	0.42	0.42	0.52	0.43	0.43	0.40	0.29	0.29	0.40	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.10	0.30	0.30	0.21	0.34	0.34	0.10	0.24	0.02	0.14	0.29	0.06
s, saturation flow rate [veh/h]	641	1900	1857	709	1900	1834	1052	1900	1537	1162	1900	1562
c, Capacity [veh/h]	291	806	788	332	818	789	264	547	443	346	582	479
d1, Uniform Delay [s]	20.55	28.35	28.42	20.27	29.25	29.50	28.31	39.79	31.08	27.09	40.70	30.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.18	0.18	0.04	0.04	0.29	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.84	5.12	5.34	4.22	7.22	7.99	1.53	5.13	0.03	0.37	18.68	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.70	0.71	0.44	0.78	0.79	0.38	0.82	0.08	0.47	0.95	0.19
d, Delay for Lane Group [s/veh]	22.39	33.47	33.77	24.49	36.46	37.49	29.84	44.93	31.11	27.46	59.38	30.71
Lane Group LOS	C	C	C	C	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.04	14.15	14.00	2.44	16.83	16.79	1.91	12.90	0.72	3.03	18.65	1.96
50th-Percentile Queue Length [ft]	26.04	353.85	349.91	61.07	420.73	419.68	47.79	322.41	18.00	75.71	466.30	49.08
95th-Percentile Queue Length [veh]	1.87	20.32	20.13	4.40	23.56	23.51	3.44	18.79	1.30	5.45	25.74	3.53
95th-Percentile Queue Length [ft]	46.87	508.10	503.30	109.93	588.93	587.67	86.03	469.65	32.39	136.29	643.38	88.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.39	33.61	33.77	24.49	36.93	37.49	29.84	44.93	31.11	27.46	59.38	30.71
Movement LOS	C	C	C	C	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	32.99			35.67			41.51			49.72		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	38.56											
Intersection LOS	D											
Intersection V/C	0.691											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	20	190	100	20	170	20	60	490	60	20	590	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	190	100	20	170	20	60	490	60	20	590	20
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	68	36	7	60	7	16	128	16	6	167	6
Total Analysis Volume [veh/h]	29	271	143	28	238	28	62	510	62	23	667	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	78	78	78	78
g / C, Green / Cycle	0.28	0.28	0.65	0.65	0.65	0.65
(v / s)_i Volume / Saturation Flow Rate	0.26	0.21	0.08	0.31	0.03	0.37
s, saturation flow rate [veh/h]	1686	1430	765	1854	853	1886
c, Capacity [veh/h]	500	430	389	1197	465	1218
d1, Uniform Delay [s]	42.28	37.41	21.23	10.87	16.99	11.86
k, delay calibration	0.37	0.22	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	15.72	3.96	0.88	1.37	0.20	1.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

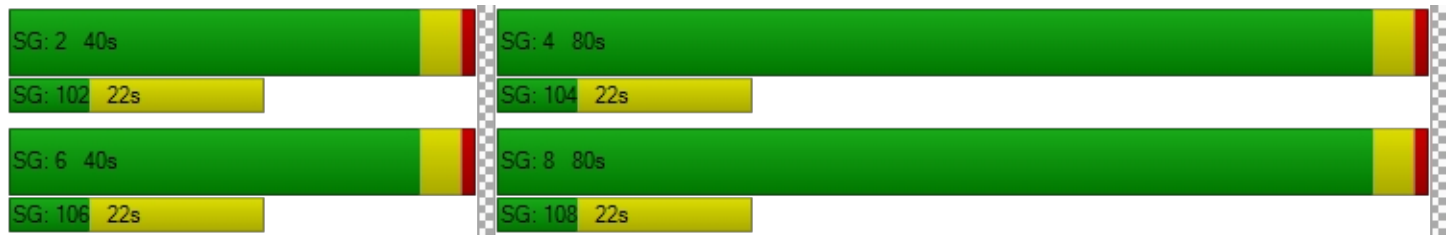
X, volume / capacity	0.89	0.68	0.16	0.48	0.05	0.57
d, Delay for Lane Group [s/veh]	57.99	41.37	22.11	12.24	17.19	13.77
Lane Group LOS	E	D	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	14.79	7.90	1.17	7.63	0.37	10.09
50th-Percentile Queue Length [ft]	369.64	197.47	29.16	190.83	9.14	252.23
95th-Percentile Queue Length [veh]	21.09	12.51	2.10	12.16	0.66	15.30
95th-Percentile Queue Length [ft]	527.29	312.70	52.48	304.10	16.46	382.46

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	57.99	57.99	57.99	41.37	41.37	41.37	22.11	12.24	12.24	17.19	13.77	13.77
Movement LOS	E	E	E	D	D	D	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	57.99			41.37			13.20			13.88		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	26.93											
Intersection LOS	C											
Intersection V/C	0.629											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	50	670	40	170	1000	110	60	440	60	120	480	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	670	40	170	1000	110	60	440	60	120	480	140
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	186	11	44	259	28	17	125	17	31	122	36
Total Analysis Volume [veh/h]	55	743	44	176	1036	114	68	500	68	122	489	143
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	53	53	65	57	57	45	33	33	45	36	36
g / C, Green / Cycle	0.55	0.44	0.44	0.55	0.47	0.47	0.38	0.28	0.28	0.38	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.09	0.21	0.21	0.20	0.31	0.32	0.06	0.26	0.04	0.11	0.26	0.10
s, saturation flow rate [veh/h]	635	1900	1852	870	1900	1796	1062	1900	1521	1109	1900	1453
c, Capacity [veh/h]	312	845	824	458	895	846	267	529	423	274	573	438
d1, Uniform Delay [s]	16.98	23.37	23.41	15.58	24.19	24.48	27.95	42.38	32.69	29.49	39.38	32.44
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.21	0.04	0.04	0.16	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	1.88	1.95	2.43	3.68	4.18	0.18	15.35	0.07	0.42	5.48	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.47	0.47	0.38	0.65	0.67	0.25	0.95	0.16	0.45	0.85	0.33
d, Delay for Lane Group [s/veh]	18.20	25.25	25.36	18.01	27.87	28.66	28.13	57.73	32.75	29.92	44.86	32.60
Lane Group LOS	B	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.80	8.28	8.15	2.70	13.32	13.16	1.26	16.46	1.50	2.34	14.14	3.21
50th-Percentile Queue Length [ft]	20.06	207.06	203.75	67.53	333.04	329.02	31.45	411.39	37.44	58.41	353.44	80.37
95th-Percentile Queue Length [veh]	1.44	13.00	12.83	4.86	19.31	19.11	2.26	23.11	2.70	4.21	20.30	5.79
95th-Percentile Queue Length [ft]	36.11	325.05	320.80	121.55	482.69	477.76	56.62	577.71	67.38	105.13	507.60	144.66

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.20	25.30	25.36	18.01	28.22	28.66	28.13	57.73	32.75	29.92	44.86	32.60
Movement LOS	B	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	24.84			26.90			51.89			40.12		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.68											
Intersection LOS	C											
Intersection V/C	0.642											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	30	290	100	80	330	40	40	510	0	30	600	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	290	100	80	330	40	40	510	0	30	600	70
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	81	28	25	101	12	11	146	0	9	176	21
Total Analysis Volume [veh/h]	34	325	112	98	405	49	46	582	0	35	706	82
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	35	35	35	35	35	35
g / C, Green / Cycle	0.37	0.37	0.37	0.37	0.37	0.37	0.50	0.50	0.50	0.50	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.04	0.19	0.08	0.10	0.24	0.03	0.07	0.34	0.00	0.05	0.41	0.06
s, saturation flow rate [veh/h]	895	1710	1371	948	1710	1425	678	1710	1454	760	1710	1264
c, Capacity [veh/h]	245	632	507	297	632	527	170	853	725	251	853	631
d1, Uniform Delay [s]	25.75	17.16	15.14	24.66	18.21	14.40	30.52	13.33	0.00	23.76	14.97	9.40
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.16	0.04	0.04	0.28	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.18	2.97	1.01	2.95	4.92	0.35	0.32	1.41	0.00	0.09	5.31	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

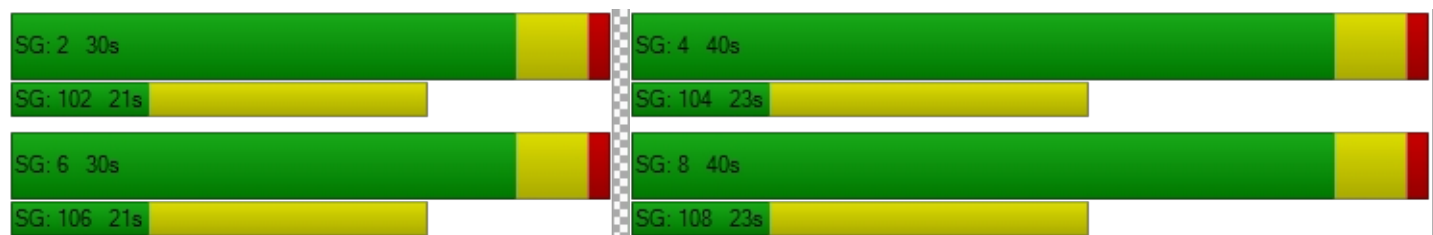
X, volume / capacity	0.14	0.51	0.22	0.33	0.64	0.09	0.27	0.68	0.00	0.14	0.83	0.13
d, Delay for Lane Group [s/veh]	26.93	20.13	16.14	27.61	23.14	14.75	30.84	14.73	0.00	23.86	20.28	9.43
Lane Group LOS	C	C	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.55	4.18	1.25	1.59	5.70	0.51	0.73	6.21	0.00	0.47	9.26	0.59
50th-Percentile Queue Length [ft]	13.69	104.51	31.34	39.74	142.58	12.85	18.19	155.23	0.00	11.69	231.62	14.75
95th-Percentile Queue Length [veh]	0.99	7.52	2.26	2.86	9.62	0.92	1.31	10.30	0.00	0.84	14.26	1.06
95th-Percentile Queue Length [ft]	24.64	188.11	56.41	71.54	240.50	23.12	32.75	257.39	0.00	21.04	356.42	26.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.93	20.13	16.14	27.61	23.14	14.75	30.84	14.73	0.00	23.86	20.28	9.43
Movement LOS	C	C	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.68			23.19			15.91			19.35		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.40											
Intersection LOS	B											
Intersection V/C	0.650											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.502

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	30	280	150	110	590	130	180	360	120	120	530	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	280	150	110	590	130	180	360	120	120	530	90
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	76	41	30	163	36	49	98	33	34	148	25
Total Analysis Volume [veh/h]	33	304	163	121	651	143	196	392	131	134	592	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	37	37	37	35	24	24	35	22	22
g / C, Green / Cycle	0.51	0.51	0.51	0.42	0.42	0.42	0.39	0.26	0.26	0.39	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.04	0.16	0.11	0.11	0.22	0.22	0.18	0.21	0.09	0.11	0.19	0.19
s, saturation flow rate [veh/h]	856	1900	1542	1075	1900	1746	1102	1900	1511	1224	1900	1761
c, Capacity [veh/h]	436	969	786	395	787	723	412	496	395	403	456	423
d1, Uniform Delay [s]	12.44	12.89	12.11	25.36	19.73	19.85	20.84	30.99	26.93	20.12	32.00	32.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.05	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.85	0.60	2.00	2.46	2.79	3.27	1.31	0.18	0.18	1.10	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

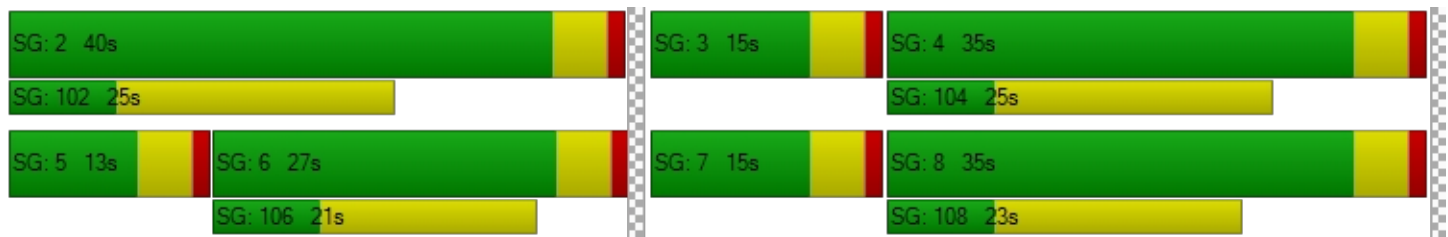
X, volume / capacity	0.08	0.31	0.21	0.31	0.52	0.53	0.48	0.79	0.33	0.33	0.78	0.80
d, Delay for Lane Group [s/veh]	12.78	13.74	12.71	27.35	22.19	22.64	24.12	32.30	27.11	20.30	33.10	33.53
Lane Group LOS	B	B	B	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.36	3.62	1.84	2.23	6.67	6.35	3.11	7.89	2.26	1.79	7.09	6.81
50th-Percentile Queue Length [ft]	8.89	90.44	45.94	55.83	166.83	158.84	77.73	197.20	56.46	44.69	177.24	170.16
95th-Percentile Queue Length [veh]	0.64	6.51	3.31	4.02	10.91	10.49	5.60	12.49	4.06	3.22	11.46	11.08
95th-Percentile Queue Length [ft]	16.01	162.79	82.70	100.50	272.74	262.19	139.91	312.36	101.62	80.44	286.41	277.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.78	13.74	12.71	27.35	22.36	22.64	24.12	32.30	27.11	20.30	33.27	33.53
Movement LOS	B	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.34			23.06			29.12			31.20		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	25.16											
Intersection LOS	C											
Intersection V/C	0.502											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.659

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	390	70	50	0	50	0	810	430	130	920	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	390	70	50	0	50	0	810	430	130	920	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	109	20	15	0	15	0	222	118	33	236	0
Total Analysis Volume [veh/h]	11	436	78	60	0	60	0	889	472	134	946	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	6	50	54	54	11	69
g / C, Green / Cycle	0.02	0.26	0.26	0.05	0.42	0.45	0.45	0.09	0.58
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.02	0.02	0.36	0.42	0.07	0.26
s, saturation flow rate [veh/h]	1810	1900	1658	3514	2818	1900	1634	1810	3618
c, Capacity [veh/h]	33	490	428	180	1180	851	732	162	2083
d1, Uniform Delay [s]	58.18	38.34	38.95	54.95	20.73	28.47	31.32	53.74	14.62
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.16	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.34	0.48	0.40	0.01	7.75	19.91	14.29	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

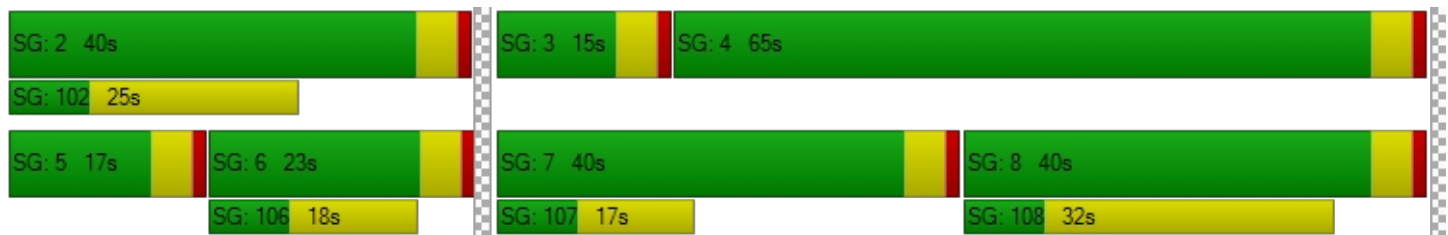
X, volume / capacity	0.33	0.54	0.59	0.33	0.05	0.80	0.93	0.83	0.45
d, Delay for Lane Group [s/veh]	60.32	38.67	39.43	55.36	20.73	36.23	51.24	68.03	15.34
Lane Group LOS	E	D	D	E	C	D	D	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.70	6.54	0.89	0.51	17.54	21.33	4.81	8.27
50th-Percentile Queue Length [ft]	8.75	167.48	163.44	22.19	12.68	438.58	533.28	120.30	206.72
95th-Percentile Queue Length [veh]	0.63	10.94	10.73	1.60	0.91	24.41	28.91	8.41	12.98
95th-Percentile Queue Length [ft]	15.75	273.60	268.27	39.95	22.82	610.31	722.64	210.24	324.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.98	39.43	55.36	0.00	20.73	0.00	39.75	51.24	68.03	15.34	0.00
Movement LOS	E	D	D	E		C		D	D	E	B	
d_A, Approach Delay [s/veh]	39.49			38.04			43.73			21.87		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	35.14											
Intersection LOS	D											
Intersection V/C	0.659											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1130	20	40	1270	30	60	70	30	30	100	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1130	20	40	1270	30	60	70	30	30	100	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	313	6	11	338	8	20	24	10	9	29	3
Total Analysis Volume [veh/h]	33	1250	22	43	1350	32	81	94	40	35	117	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.08	0.34	0.34	0.10	0.36	0.37	0.14	0.10
s, saturation flow rate [veh/h]	398	1900	1885	442	1900	1882	1507	1694
c, Capacity [veh/h]	275	1287	1277	306	1287	1275	375	406
d1, Uniform Delay [s]	12.43	6.26	6.27	11.58	6.55	6.56	29.17	27.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	1.37	1.38	0.96	1.62	1.65	0.52	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

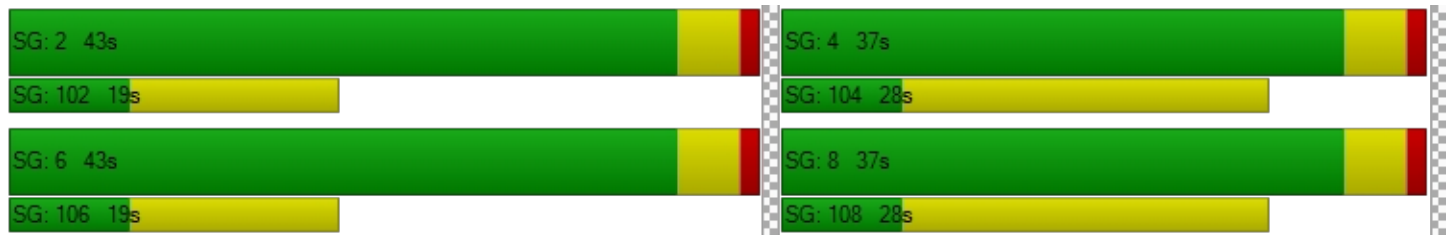
X, volume / capacity	0.12	0.50	0.50	0.14	0.54	0.54	0.57	0.40
d, Delay for Lane Group [s/veh]	13.32	7.63	7.65	12.54	8.17	8.21	29.68	27.76
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.38	4.41	4.39	0.48	5.03	5.02	3.70	2.63
50th-Percentile Queue Length [ft]	9.59	110.13	109.78	11.89	125.83	125.41	92.38	65.70
95th-Percentile Queue Length [veh]	0.69	7.85	7.83	0.86	8.71	8.69	6.65	4.73
95th-Percentile Queue Length [ft]	17.27	196.19	195.69	21.41	217.81	217.25	166.29	118.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.32	7.64	7.65	12.54	8.19	8.21	29.68	29.68	29.68	27.76	27.76	27.76
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.78			8.32			29.68			27.76		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.60											
Intersection LOS	B											
Intersection V/C	0.509											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.571

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	700	30	50	1190	30	40	120	20	70	160	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	700	30	50	1190	30	40	120	20	70	160	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	200	9	13	320	8	14	43	7	21	49	12
Total Analysis Volume [veh/h]	34	799	34	54	1281	32	58	174	29	85	194	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.08	0.22	0.22	0.08	0.35	0.35	0.18	0.22
s, saturation flow rate [veh/h]	425	1900	1863	667	1900	1879	1465	1471
c, Capacity [veh/h]	250	1153	1131	405	1153	1141	462	465
d1, Uniform Delay [s]	16.91	7.92	7.93	12.11	9.45	9.47	24.53	26.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	0.89	0.91	0.68	2.06	2.10	0.40	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.36	0.37	0.13	0.57	0.57	0.56	0.70
d, Delay for Lane Group [s/veh]	18.05	8.81	8.85	12.80	11.50	11.56	24.93	27.45
Lane Group LOS	B	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.48	3.44	3.40	0.60	6.57	6.55	4.04	5.62
50th-Percentile Queue Length [ft]	12.12	86.00	85.08	14.93	164.27	163.66	101.07	140.55
95th-Percentile Queue Length [veh]	0.87	6.19	6.13	1.07	10.77	10.74	7.28	9.51
95th-Percentile Queue Length [ft]	21.81	154.80	153.14	26.87	269.37	268.56	181.93	237.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.05	8.83	8.85	12.80	11.53	11.56	24.93	24.93	24.93	27.45	27.45	27.45
Movement LOS	B	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.19			11.58			24.93			27.45		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	13.93											
Intersection LOS	B											
Intersection V/C	0.571											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.625

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	1100	10	30	1360	70	20	110	10	180	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1100	10	30	1360	70	20	110	10	180	80	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	316	3	8	362	19	6	32	3	49	22	5
Total Analysis Volume [veh/h]	34	1264	11	32	1450	75	23	127	12	195	87	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	22	22	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.10	0.34	0.34	0.07	0.40	0.41	0.14	0.01	0.22	0.01
s, saturation flow rate [veh/h]	347	1900	1893	441	1900	1859	1085	1564	1300	1558
c, Capacity [veh/h]	203	1162	1158	264	1162	1137	348	427	431	426
d1, Uniform Delay [s]	20.19	9.08	9.08	15.79	10.11	10.18	23.51	21.29	26.98	21.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.78	1.87	1.88	0.94	2.94	3.10	0.31	0.01	0.63	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.55	0.55	0.12	0.66	0.67	0.43	0.03	0.65	0.05
d, Delay for Lane Group [s/veh]	21.97	10.95	10.96	16.73	13.05	13.28	23.82	21.30	27.61	21.45
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.55	5.90	5.89	0.43	8.04	8.04	2.15	0.16	4.77	0.29
50th-Percentile Queue Length [ft]	13.70	147.60	147.33	10.63	200.95	201.03	53.85	3.97	119.30	7.33
95th-Percentile Queue Length [veh]	0.99	9.89	9.87	0.77	12.69	12.69	3.88	0.29	8.35	0.53
95th-Percentile Queue Length [ft]	24.66	247.22	246.86	19.14	317.20	317.30	96.94	7.15	208.86	13.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.97	10.95	10.96	16.73	13.16	13.28	23.82	23.82	21.30	27.61	27.61	21.45
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.24			13.24			23.64			27.16		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.23											
Intersection LOS	B											
Intersection V/C	0.625											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1170	120	70	1370	160	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1170	120	70	1370	160	120
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	310	32	19	363	42	32
Total Analysis Volume [veh/h]	1240	127	74	1450	169	127
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	69	69	11	11
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.37	0.38	0.19	0.41	0.10	0.08
s, saturation flow rate [veh/h]	1863	1792	396	3547	1771	1556
c, Capacity [veh/h]	1439	1384	316	2739	222	195
d1, Uniform Delay [s]	3.68	3.76	8.97	3.94	38.00	37.43
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	1.26	1.73	0.74	5.35	3.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

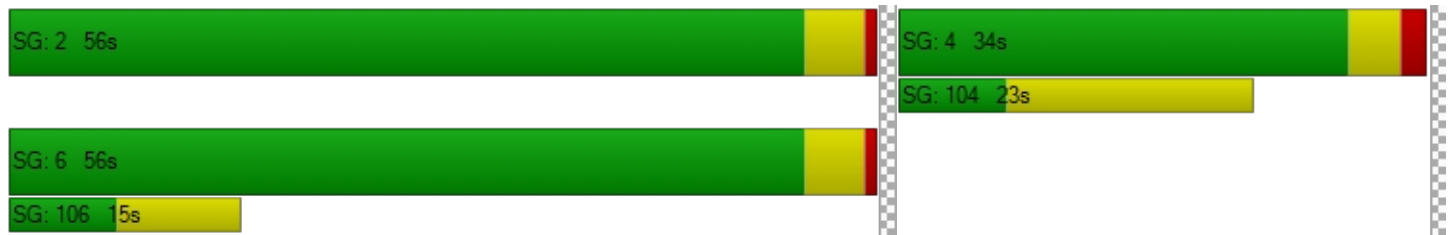
X, volume / capacity	0.48	0.49	0.23	0.53	0.76	0.65
d, Delay for Lane Group [s/veh]	4.80	5.02	10.70	4.67	43.35	41.07
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.23	3.32	0.80	3.71	3.83	2.79
50th-Percentile Queue Length [ft]	80.64	83.12	20.12	92.76	95.78	69.73
95th-Percentile Queue Length [veh]	5.81	5.98	1.45	6.68	6.90	5.02
95th-Percentile Queue Length [ft]	145.15	149.62	36.21	166.97	172.40	125.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.90	5.02	10.70	4.67	43.35	41.07
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	4.91		4.97		42.37	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.42					
Intersection LOS	A					
Intersection V/C	0.504					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.714

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	710	80	80	1270	50	100	290	50	30	210	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	710	80	80	1270	50	100	290	50	30	210	50
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	193	22	22	353	14	28	82	14	8	59	14
Total Analysis Volume [veh/h]	22	772	87	89	1412	56	113	328	57	34	236	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	29	29	22	22
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.23	0.14	0.39	0.39	0.32	0.19
s, saturation flow rate [veh/h]	367	1900	1816	652	1900	1864	1549	1673
c, Capacity [veh/h]	167	923	882	316	923	905	632	669
d1, Uniform Delay [s]	24.19	10.27	10.30	16.95	12.92	13.01	17.93	14.91
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	1.74	1.85	2.21	7.17	7.65	5.26	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

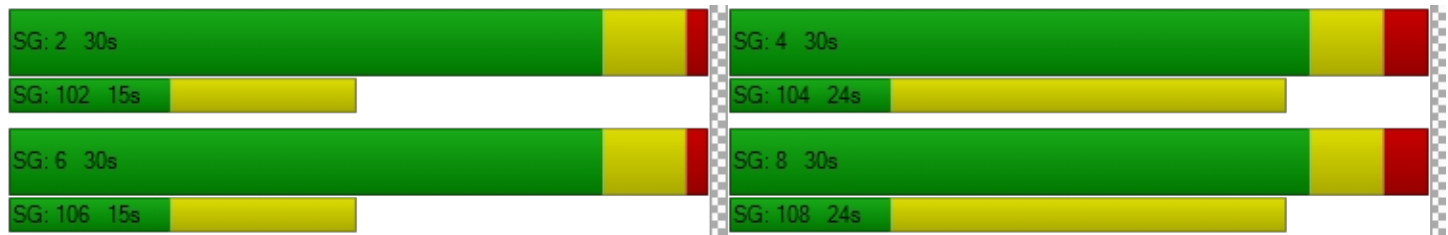
X, volume / capacity	0.13	0.47	0.48	0.28	0.80	0.81	0.79	0.49
d, Delay for Lane Group [s/veh]	25.81	12.01	12.16	19.16	20.09	20.66	23.19	15.12
Lane Group LOS	C	B	B	B	C	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	3.68	3.58	1.10	8.69	8.76	6.48	3.02
50th-Percentile Queue Length [ft]	8.69	91.89	89.50	27.45	217.20	219.04	162.08	75.59
95th-Percentile Queue Length [veh]	0.63	6.62	6.44	1.98	13.52	13.62	10.66	5.44
95th-Percentile Queue Length [ft]	15.64	165.40	161.11	49.41	338.05	340.41	266.47	136.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.81	12.08	12.16	19.16	20.36	20.66	23.19	23.19	23.19	15.12	15.12	15.12
Movement LOS	C	B	B	B	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	12.43			20.30			23.19			15.12		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	18.10											
Intersection LOS	B											
Intersection V/C	0.714											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	180	120	40	200	20	70	390	50	10	360	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	180	120	40	200	20	70	390	50	10	360	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	52	35	12	60	6	21	116	15	3	97	5
Total Analysis Volume [veh/h]	23	210	140	48	239	24	83	464	59	11	387	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	18	33	33
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.02	0.21	0.05	0.13	0.02	0.35	0.23
s, saturation flow rate [veh/h]	1154	1707	1024	1863	1531	1717	1862
c, Capacity [veh/h]	301	518	199	565	464	1002	1074
d1, Uniform Delay [s]	21.79	18.33	26.81	16.72	14.81	9.32	8.05
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	1.55	0.62	0.50	0.05	2.71	1.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

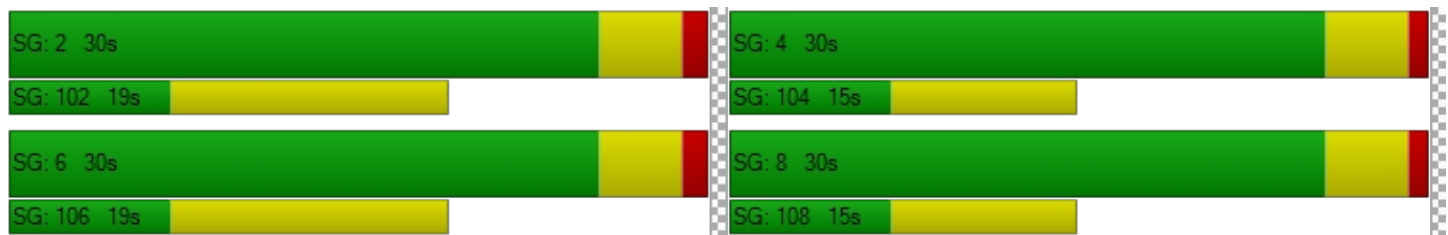
X, volume / capacity	0.08	0.68	0.24	0.42	0.05	0.61	0.39
d, Delay for Lane Group [s/veh]	21.89	19.89	27.43	17.22	14.85	12.03	9.12
Lane Group LOS	C	B	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.27	3.96	0.66	2.47	0.22	4.82	2.76
50th-Percentile Queue Length [ft]	6.63	98.95	16.56	61.68	5.46	120.40	68.95
95th-Percentile Queue Length [veh]	0.48	7.12	1.19	4.44	0.39	8.42	4.96
95th-Percentile Queue Length [ft]	11.94	178.11	29.81	111.02	9.82	210.38	124.11

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.89	19.89	19.89	27.43	17.22	14.85	12.03	12.03	12.03	9.12	9.12	9.12
Movement LOS	C	B	B	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	20.01			18.62			12.03			9.12		
Approach LOS	C			B			B			A		
d_I, Intersection Delay [s/veh]	14.26											
Intersection LOS	B											
Intersection V/C	0.558											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	760	0	200	0	0	0	0	1250	310	150	1450	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	760	0	200	0	0	0	0	1250	310	150	1450	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	0	52	0	0	0	0	342	85	43	415	0
Total Analysis Volume [veh/h]	795	0	209	0	0	0	0	1369	339	172	1661	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	0	66	66	110	66	66	66
g / C, Green / Cycle	0.33	0.33	0.00	0.55	0.55	0.92	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.28	0.29	0.00	0.00	0.26	0.21	0.43	0.30	0.30
s, saturation flow rate [veh/h]	1810	1689	1863	298	5176	1595	403	3618	1900
c, Capacity [veh/h]	597	557	7	161	2851	1461	209	1992	1046
d1, Uniform Delay [s]	37.35	38.10	0.00	0.00	16.44	0.54	40.76	17.29	17.29
k, delay calibration	0.17	0.20	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.46	8.89	0.00	0.00	0.58	0.08	29.31	1.08	2.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

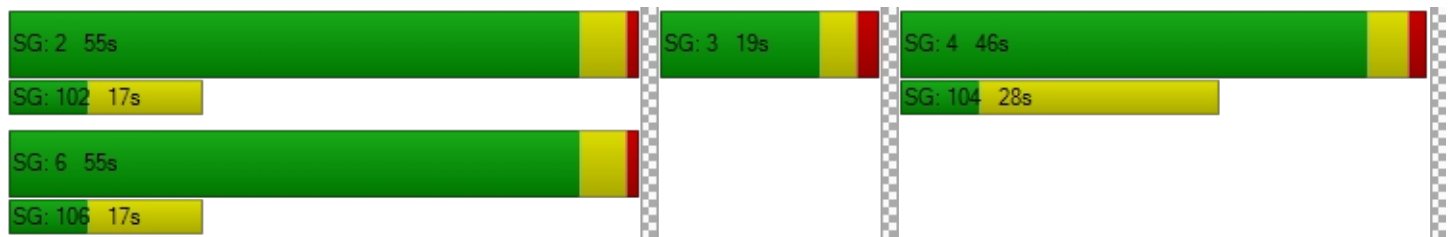
X, volume / capacity	0.85	0.89	0.00	0.00	0.48	0.23	0.82	0.55	0.55
d, Delay for Lane Group [s/veh]	42.81	46.99	0.00	0.00	17.02	0.62	70.07	18.38	19.35
Lane Group LOS	D	D	A	A	B	A	E	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	14.58	15.05	0.00	0.00	7.51	0.03	6.89	9.54	10.30
50th-Percentile Queue Length [ft]	364.42	376.22	0.00	0.00	187.73	0.82	172.37	238.38	257.45
95th-Percentile Queue Length [veh]	20.84	21.41	0.00	0.00	12.00	0.06	11.20	14.60	15.56
95th-Percentile Queue Length [ft]	520.95	535.27	0.00	0.00	300.08	1.47	280.02	364.99	389.02

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.33	46.99	46.99	0.00	0.00	0.00	0.00	17.02	0.62	70.07	18.71	19.35
Movement LOS	D	D	D	A	A	A	A	B	A	E	B	B
d_A, Approach Delay [s/veh]	44.88			0.00			13.76			23.53		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	24.58											
Intersection LOS	C											
Intersection V/C	0.721											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	160	70	30	240	30	30	110	90	20	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	160	70	30	240	30	30	110	90	20	190	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	49	22	9	69	9	9	31	26	5	52	8
Total Analysis Volume [veh/h]	12	198	87	34	274	34	34	125	102	22	208	33
Pedestrian Volume [ped/h]	17			9			15			28		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	577	576	565	553
Degree of Utilization, x	0.51	0.59	0.46	0.48

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.94	3.88	2.42	2.54
95th-Percentile Queue Length [ft]	73.39	96.95	60.57	63.50
Approach Delay [s/veh]	15.67	18.00	14.73	15.26
Approach LOS	C	C	B	C
Intersection Delay [s/veh]	16.05			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.370

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	660	520	40	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	660	520	40	80	20
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	199	144	11	24	6
Total Analysis Volume [veh/h]	12	795	574	44	96	24
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	10	4
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.17
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.30	0.03	0.07
s, saturation flow rate [veh/h]	846	3618	1900	1577	1767
c, Capacity [veh/h]	409	1596	838	696	297
d1, Uniform Delay [s]	9.21	4.71	5.27	3.78	8.74
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.37	0.01	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

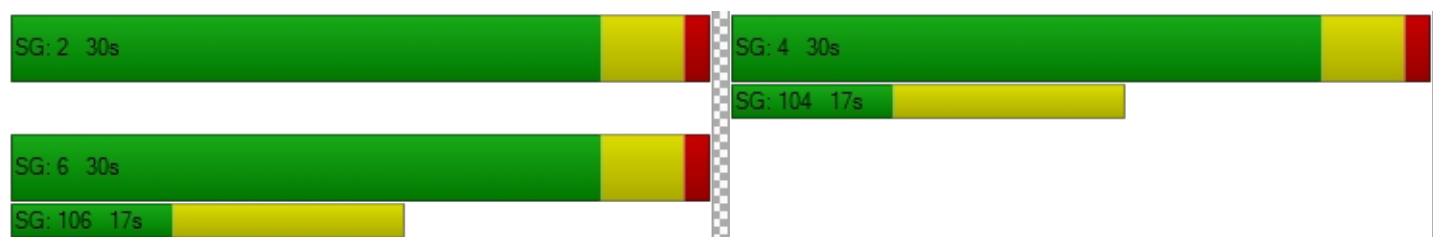
X, volume / capacity	0.03	0.50	0.68	0.06	0.40
d, Delay for Lane Group [s/veh]	9.22	4.80	5.64	3.80	9.07
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.40	0.70	0.04	0.39
50th-Percentile Queue Length [ft]	0.89	10.05	17.59	0.92	9.69
95th-Percentile Queue Length [veh]	0.06	0.72	1.27	0.07	0.70
95th-Percentile Queue Length [ft]	1.61	18.09	31.67	1.65	17.44

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.22	4.80	5.64	3.80	9.07	9.07
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.87		5.51		9.07	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.45					
Intersection LOS	A					
Intersection V/C	0.370					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \(\WEST\)OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Base Volume Input [veh/h]	0	0	0	40	1020	10	10	1510	700	550	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1020	10	10	1510	700	550	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	306	3	3	396	184	170	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1225	10	10	1584	734	680	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		60	60	60	60	60	60	21	21
g / C, Green / Cycle		0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate		0.15	0.33	0.33	0.02	0.44	0.45	0.19	0.04
s, saturation flow rate [veh/h]		328	1900	1895	449	3618	1615	3514	1617
c, Capacity [veh/h]		201	1262	1258	291	2403	1073	820	378
d1, Uniform Delay [s]		20.93	7.51	7.51	12.89	9.01	9.29	32.73	27.62
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.78	1.36	1.37	0.22	1.44	3.55	2.23	0.24
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.24	0.49	0.49	0.03	0.66	0.68	0.83	0.19
d, Delay for Lane Group [s/veh]		23.72	8.87	8.88	13.11	10.45	12.84	34.96	27.87
Lane Group LOS		C	A	A	B	B	B	C	C
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.95	6.76	6.74	0.12	7.92	8.16	7.01	1.23
50th-Percentile Queue Length [ft]		23.86	168.92	168.55	3.03	198.02	204.11	175.31	30.84
95th-Percentile Queue Length [veh]		1.72	11.02	11.00	0.22	12.54	12.85	11.36	2.22
95th-Percentile Queue Length [ft]		42.95	275.50	275.01	5.46	313.41	321.26	283.88	55.50



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	23.72	8.88	8.88	13.11	10.45	12.84	34.96	27.87	27.87
Movement LOS				C	A	A	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	0.00			9.43			11.22			34.28		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.67											
Intersection LOS	B											
Intersection V/C	0.648											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	83.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	600	340	410	0	530	340	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	600	340	410	0	530	340	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	162	92	110	0	143	91	0	21
Total Analysis Volume [veh/h]	0	0	0	0	649	368	442	0	571	362	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.36	0.23	0.24	0.30	0.19	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.53	37.79	12.43	23.56	20.13
k, delay calibration		0.49	0.43	0.48	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		54.24	1.19	251.53	1.94	3.21	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

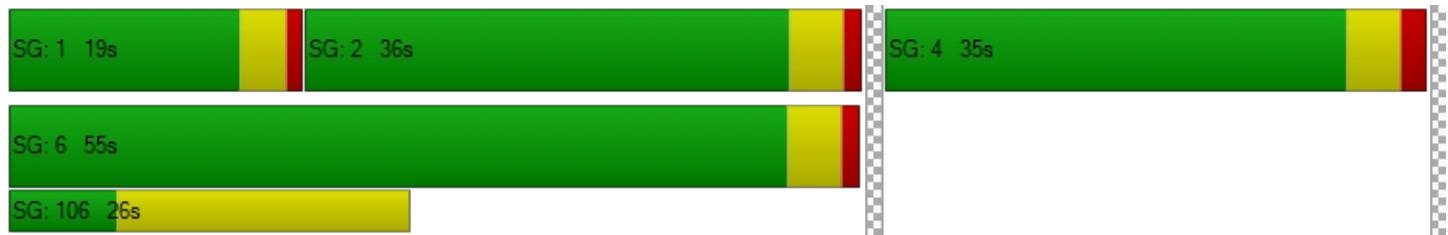
X, volume / capacity		1.06	0.41	1.52	0.54	0.55	0.15
d, Delay for Lane Group [s/veh]		84.07	12.71	289.32	14.36	26.77	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		22.20	4.43	26.54	7.19	6.58	1.29
50th-Percentile Queue Length [ft]		555.12	110.85	663.47	179.83	164.53	32.26
95th-Percentile Queue Length [veh]		31.18	7.89	41.34	11.59	10.79	2.32
95th-Percentile Queue Length [ft]		779.60	197.19	1033.57	289.79	269.71	58.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	84.07	12.71	289.32	0.00	14.36	26.77	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			58.25			134.34			25.62		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	83.48											
Intersection LOS	F											
Intersection V/C	0.793											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	180	100	170	220	10	70	1000	60	0	1030	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	180	100	170	220	10	70	1000	60	0	1030	80
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	51	28	54	69	3	18	264	16	0	276	21
Total Analysis Volume [veh/h]	56	203	113	214	277	13	74	1055	63	0	1103	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	32	32	49	49	49	49	49
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.06	0.12	0.08	0.21	0.17	0.18	0.23	0.23	0.35	0.37
s, saturation flow rate [veh/h]	971	1676	1347	1041	1661	422	3192	1614	1676	1621
c, Capacity [veh/h]	267	600	482	330	594	191	1724	872	905	875
d1, Uniform Delay [s]	31.15	21.12	20.26	32.68	22.49	29.67	12.39	12.43	14.75	15.03
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	0.33	0.25	2.14	0.62	5.85	0.78	1.57	3.71	4.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.34	0.23	0.65	0.49	0.39	0.43	0.43	0.66	0.68
d, Delay for Lane Group [s/veh]	31.54	21.45	20.51	34.81	23.11	35.52	13.18	14.00	18.46	19.26
Lane Group LOS	C	C	C	C	C	D	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.06	3.10	1.66	4.54	4.74	1.70	4.33	4.62	8.85	9.10
50th-Percentile Queue Length [ft]	26.46	77.56	41.51	113.49	118.45	42.59	108.19	115.54	221.26	227.43
95th-Percentile Queue Length [veh]	1.91	5.58	2.99	8.03	8.31	3.07	7.74	8.15	13.73	14.04
95th-Percentile Queue Length [ft]	47.63	139.60	74.71	200.84	207.69	76.67	193.48	203.68	343.24	351.10



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.54	21.45	20.51	34.81	23.11	23.11	35.52	13.42	14.00	0.00	18.83	19.26
Movement LOS	C	C	C	C	C	C	D	B	B		B	B
d_A, Approach Delay [s/veh]	22.69			28.08			14.82			18.86		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.25											
Intersection LOS	B											
Intersection V/C	0.572											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.746

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	1290	80	130	1410	80	190	640	130	110	650	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1290	80	130	1410	80	190	640	130	110	650	90
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	334	21	35	376	21	50	168	34	29	174	24
Total Analysis Volume [veh/h]	72	1336	83	138	1502	85	199	672	136	118	695	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	45	35	35	45	37	37	36	26	26	36	23	23
g / C, Green / Cycle	0.50	0.39	0.39	0.50	0.41	0.41	0.40	0.29	0.29	0.40	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.13	0.38	0.06	0.21	0.42	0.06	0.20	0.22	0.22	0.13	0.21	0.22
s, saturation flow rate [veh/h]	547	3547	1506	645	3547	1451	1015	1900	1743	909	1900	1783
c, Capacity [veh/h]	251	1382	587	288	1441	590	386	554	508	345	486	456
d1, Uniform Delay [s]	20.18	26.93	17.77	19.98	26.75	16.87	21.18	28.95	29.18	19.95	31.69	31.88
k, delay calibration	0.45	0.50	0.50	0.50	0.50	0.50	0.50	0.17	0.19	0.11	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.59	17.46	0.50	5.63	35.44	0.51	4.85	3.31	4.27	0.59	5.97	7.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.97	0.14	0.48	1.04	0.14	0.52	0.75	0.77	0.34	0.83	0.85
d, Delay for Lane Group [s/veh]	22.76	44.39	18.27	25.60	62.19	17.38	26.03	32.26	33.45	20.54	37.66	39.33
Lane Group LOS	C	D	B	C	F	B	C	C	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.91	16.60	1.17	1.91	21.60	1.16	3.22	8.29	7.99	1.61	8.88	8.73
50th-Percentile Queue Length [ft]	22.85	415.02	29.21	47.80	539.97	29.07	80.40	207.31	199.86	40.13	222.06	218.20
95th-Percentile Queue Length [veh]	1.65	23.28	2.10	3.44	30.10	2.09	5.79	13.02	12.63	2.89	13.77	13.57
95th-Percentile Queue Length [ft]	41.13	582.07	52.57	86.04	752.39	52.32	144.73	325.38	315.79	72.24	344.25	339.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.76	44.39	18.27	25.60	62.19	17.38	26.03	32.71	33.45	20.54	38.36	39.33
Movement LOS	C	D	B	C	F	B	C	C	C	C	D	D
d_A, Approach Delay [s/veh]	41.89			57.06			31.49			36.15		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	43.93											
Intersection LOS	D											
Intersection V/C	0.746											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.501

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	50	660	140	0	1010	90	70	920	70	60	900	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	660	140	0	1010	90	70	920	70	60	900	40
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	167	35	0	273	24	18	240	18	16	243	11
Total Analysis Volume [veh/h]	51	669	142	0	1093	97	73	960	73	65	973	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	48	48	48	48	48	48
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.11	0.22	0.23	0.22	0.23	0.13	0.27	0.05	0.11	0.27	0.27
s, saturation flow rate [veh/h]	474	1863	1716	3547	1736	561	3618	1525	582	1900	1856
c, Capacity [veh/h]	154	676	623	1288	630	268	1934	815	278	1016	993
d1, Uniform Delay [s]	35.94	23.54	23.68	23.52	23.66	22.87	13.26	10.23	22.02	13.33	13.38
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	0.92	1.06	0.48	1.04	2.50	0.91	0.22	1.96	1.78	1.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.62	0.63	0.62	0.63	0.27	0.50	0.09	0.23	0.50	0.51
d, Delay for Lane Group [s/veh]	37.19	24.46	24.74	24.00	24.70	25.36	14.17	10.45	23.98	15.12	15.23
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.10	7.21	6.84	6.76	6.89	1.34	5.95	0.72	1.13	6.46	6.40
50th-Percentile Queue Length [ft]	27.39	180.15	171.03	168.91	172.33	33.43	148.79	17.97	28.23	161.54	160.04
95th-Percentile Queue Length [veh]	1.97	11.61	11.13	11.02	11.20	2.41	9.95	1.29	2.03	10.63	10.55
95th-Percentile Queue Length [ft]	49.30	290.21	278.26	275.48	279.98	60.18	248.81	32.34	50.81	265.76	263.78



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.19	24.57	24.74	0.00	24.19	24.70	25.36	14.17	10.45	23.98	15.17	15.23
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	25.34			24.23			14.67			15.70		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.79											
Intersection LOS	B											
Intersection V/C	0.501											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	68.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.846

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	170	870	110	210	1240	110	320	1210	230	140	1020	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	170	870	110	210	1240	110	320	1210	230	140	1020	160
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	236	30	58	342	30	82	309	59	37	267	42
Total Analysis Volume [veh/h]	184	943	119	232	1367	121	327	1236	235	146	1066	167
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	39	56	12	39	54	12	39	57	11	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.45	0.10	0.33	0.47	0.09	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.10	0.19	0.08	0.07	0.27	0.08	0.18	0.34	0.16	0.08	0.29	0.11
s, saturation flow rate [veh/h]	1810	5074	1572	3445	5074	1515	1810	3618	1440	1774	3618	1518
c, Capacity [veh/h]	187	1631	736	356	1631	694	187	1188	684	166	1153	484
d1, Uniform Delay [s]	53.73	33.96	18.38	51.75	37.85	19.15	53.83	40.32	19.77	53.75	39.52	31.32
k, delay calibration	0.26	0.50	0.50	0.11	0.50	0.50	0.50	0.20	0.50	0.16	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	43.47	1.50	0.47	2.01	5.33	0.55	357.64	28.29	1.37	18.41	7.31	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

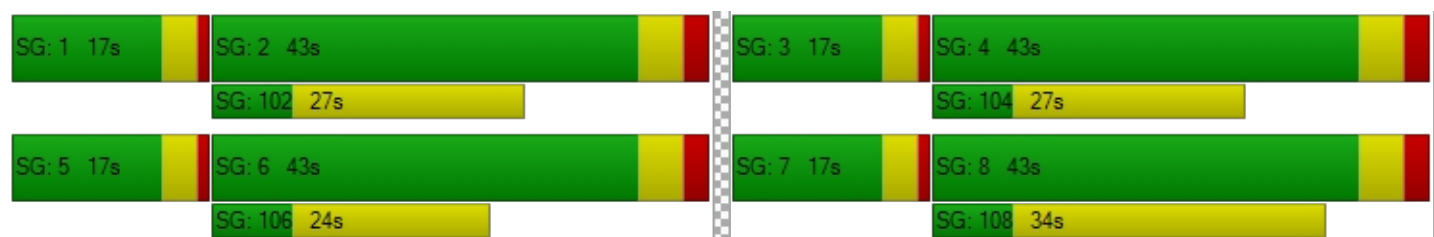
X, volume / capacity	0.98	0.58	0.16	0.65	0.84	0.17	1.75	1.04	0.34	0.88	0.92	0.35
d, Delay for Lane Group [s/veh]	97.20	35.46	18.85	53.76	43.18	19.70	411.47	68.61	21.14	72.16	46.83	32.23
Lane Group LOS	F	D	B	D	D	B	F	F	C	E	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	7.75	7.77	1.98	3.46	13.13	2.10	24.18	21.70	4.30	5.16	15.98	3.80
50th-Percentile Queue Length [ft]	193.64	194.22	49.54	86.49	328.25	52.61	604.43	542.60	107.40	129.09	399.40	94.95
95th-Percentile Queue Length [veh]	12.31	12.34	3.57	6.23	19.07	3.79	38.23	30.13	7.70	8.89	22.53	6.84
95th-Percentile Queue Length [ft]	307.75	308.49	89.17	155.67	476.81	94.69	955.85	753.32	192.38	222.26	563.28	170.91

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	97.20	35.46	18.85	53.76	43.18	19.70	411.47	68.61	21.14	72.16	46.83	32.23
Movement LOS	F	D	B	D	D	B	F	F	C	E	D	C
d_A, Approach Delay [s/veh]	42.99			42.96			124.76			47.75		
Approach LOS	D			D			F			D		
d_I, Intersection Delay [s/veh]	67.98											
Intersection LOS	E											
Intersection V/C	0.846											

**Sequence**



Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	170.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.113

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	2010	860	680	1630
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	2010	860	680	1630
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	517	221	186	445
Total Analysis Volume [veh/h]	0	0	2068	885	742	1779
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	36	36	45	85
g / C, Green / Cycle	0.40	0.40	0.50	0.95
(v / s)_i Volume / Saturation Flow Rate	0.65	0.62	0.46	0.56
s, saturation flow rate [veh/h]	3192	1421	1597	3192
c, Capacity [veh/h]	1270	566	798	3025
d1, Uniform Delay [s]	27.08	27.08	21.02	0.28
k, delay calibration	0.50	0.50	0.34	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	286.42	262.76	14.02	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.63	1.56	0.93	0.59
d, Delay for Lane Group [s/veh]	313.50	289.84	35.03	1.12
Lane Group LOS	F	F	D	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	63.33	52.69	16.14	0.36
50th-Percentile Queue Length [ft]	1583.34	1317.24	403.51	8.88
95th-Percentile Queue Length [veh]	98.98	82.38	22.73	0.64
95th-Percentile Queue Length [ft]	2474.52	2059.50	568.23	15.99



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	313.50	289.84	35.03	1.12
Movement LOS			F	F	D	A
d_A, Approach Delay [s/veh]	0.00		306.41		11.10	
Approach LOS	A		F		B	
d_I, Intersection Delay [s/veh]	170.41					
Intersection LOS	F					
Intersection V/C	1.113					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	54.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.836

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	80	1670	70	60	1530	60	180	370	70	90	320	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	1670	70	60	1530	60	180	370	70	90	320	130
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	452	19	17	425	17	51	105	20	24	85	35
Total Analysis Volume [veh/h]	87	1810	76	67	1700	67	204	419	79	96	340	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	81	81	81	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.54	0.54	0.54	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.34	0.57	0.05	0.17	0.53	0.05	0.25	0.13	0.06	0.11	0.15	0.17
s, saturation flow rate [veh/h]	259	3192	1425	404	3192	1384	816	3192	1352	860	1676	1357
c, Capacity [veh/h]	77	1731	773	201	2030	880	169	966	409	207	508	411
d1, Uniform Delay [s]	71.76	34.29	16.57	33.76	21.26	10.44	66.96	41.94	38.69	56.12	42.79	43.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.11	0.11	0.11	0.11	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	141.18	34.56	0.25	4.42	4.32	0.17	123.40	0.31	0.23	1.62	0.74	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.13	1.05	0.10	0.33	0.84	0.08	1.20	0.43	0.19	0.46	0.49	0.56
d, Delay for Lane Group [s/veh]	212.93	68.85	16.83	38.18	25.58	10.61	190.36	42.24	38.92	57.75	43.53	45.30
Lane Group LOS	F	F	B	D	C	B	F	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	6.02	38.90	1.35	1.12	23.55	0.91	12.38	6.35	2.22	3.45	7.76	7.37
50th-Percentile Queue Length [ft]	150.44	972.49	33.81	28.02	588.72	22.65	309.39	158.73	55.51	86.32	193.95	184.26
95th-Percentile Queue Length [veh]	10.79	50.99	2.43	2.02	31.51	1.63	20.03	10.48	4.00	6.21	12.33	11.82
95th-Percentile Queue Length [ft]	269.71	1274.77	60.86	50.44	787.68	40.76	500.85	262.05	99.92	155.37	308.14	295.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	212.93	68.85	16.83	38.18	25.58	10.61	190.36	42.24	38.92	57.75	44.00	45.30
Movement LOS	F	F	B	D	C	B	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	73.20			25.49			84.91			46.61		
Approach LOS	E			C			F			D		
d_I, Intersection Delay [s/veh]	54.60											
Intersection LOS	D											
Intersection V/C	0.836											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	80	920	70	110	1220	60	100	520	90	110	480	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	920	70	110	1220	60	100	520	90	110	480	70
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	234	18	30	328	16	26	134	23	28	122	18
Total Analysis Volume [veh/h]	81	936	71	118	1311	64	103	534	92	112	489	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	50	50	50	50	50
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.45	0.45	0.45	0.45	0.45
(v / s)_j Volume / Saturation Flow Rate	0.23	0.21	0.21	0.24	0.28	0.29	0.14	0.32	0.07	0.14	0.34
s, saturation flow rate [veh/h]	354	3192	1611	502	3192	1633	762	1676	1402	780	1636
c, Capacity [veh/h]	146	1488	751	216	1488	761	182	755	631	208	737
d1, Uniform Delay [s]	42.52	19.83	19.86	35.25	21.92	21.95	45.57	24.39	17.78	42.94	25.26
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	14.32	0.98	1.96	9.60	1.88	3.66	1.02	1.70	0.04	0.81	2.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.55	0.45	0.45	0.55	0.61	0.61	0.56	0.71	0.15	0.54	0.76
d, Delay for Lane Group [s/veh]	56.84	20.81	21.82	44.85	23.80	25.61	46.58	26.09	17.82	43.75	28.16
Lane Group LOS	E	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.76	5.88	6.18	3.43	8.93	9.54	2.79	11.25	1.38	2.94	12.43
50th-Percentile Queue Length [ft]	68.94	146.99	154.55	85.83	223.23	238.54	69.68	281.24	34.39	73.39	310.67
95th-Percentile Queue Length [veh]	4.96	9.86	10.26	6.18	13.83	14.61	5.02	16.75	2.48	5.28	18.21
95th-Percentile Queue Length [ft]	124.08	246.41	256.49	154.49	345.74	365.19	125.43	418.75	61.90	132.10	455.20

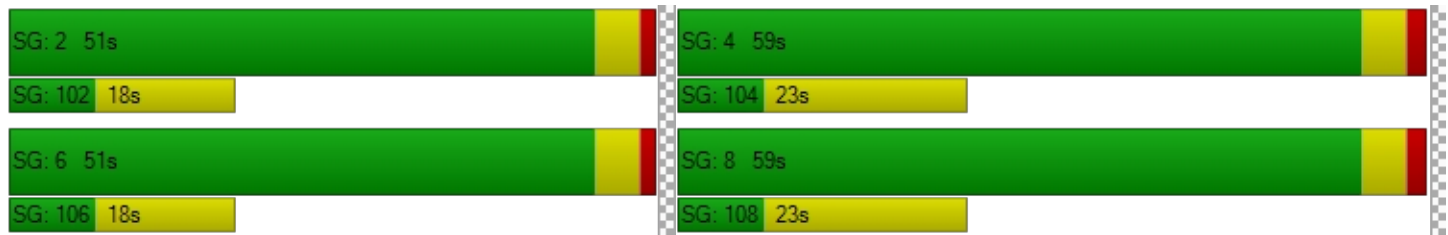


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.84	21.10	21.82	44.85	24.36	25.61	46.58	26.09	17.82	43.75	28.16	28.16
Movement LOS	E	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	23.81			26.03			27.94			30.76		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.57											
Intersection LOS	C											
Intersection V/C	0.628											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	102.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.164

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⏏			⏏			⏏			⏏		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	330	250	50	450	60	850	1650	50	30	770	270
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	330	250	50	450	60	850	1650	50	30	770	270
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	94	71	15	137	18	226	440	13	8	215	75
Total Analysis Volume [veh/h]	46	376	285	61	547	73	906	1758	53	34	861	302
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	35	55	44	27	27	67	60	60	67	47	63
g / C, Green / Cycle	0.36	0.29	0.46	0.36	0.23	0.23	0.56	0.50	0.50	0.56	0.39	0.53
(v / s)_j Volume / Saturation Flow Rate	0.04	0.12	0.18	0.06	0.20	0.20	0.94	0.48	0.48	0.09	0.24	0.19
s, saturation flow rate [veh/h]	1061	3080	1570	1084	1618	1544	962	1900	1878	381	3618	1581
c, Capacity [veh/h]	318	898	728	382	371	354	503	945	935	181	1422	842
d1, Uniform Delay [s]	28.16	34.31	21.12	26.79	44.33	44.43	33.60	28.95	29.26	27.32	29.02	16.22
k, delay calibration	0.11	0.11	0.47	0.11	0.17	0.17	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.31	1.50	0.19	8.46	9.48	368.80	20.67	22.78	2.30	1.92	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.42	0.39	0.16	0.85	0.86	1.80	0.96	0.97	0.19	0.61	0.36
d, Delay for Lane Group [s/veh]	28.36	34.62	22.62	26.99	52.80	53.92	402.40	49.62	52.04	29.61	30.94	17.41
Lane Group LOS	C	C	C	C	D	D	F	D	D	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.89	4.43	5.45	1.21	9.83	9.58	59.52	28.58	29.32	0.52	10.04	4.93
50th-Percentile Queue Length [ft]	22.36	110.82	136.35	30.23	245.76	239.43	1488.05	714.59	732.90	13.06	251.10	123.34
95th-Percentile Queue Length [veh]	1.61	7.89	9.28	2.18	14.97	14.65	98.71	37.35	38.20	0.94	15.24	8.58
95th-Percentile Queue Length [ft]	40.25	197.14	232.10	54.42	374.31	366.32	2467.86	933.80	954.89	23.50	381.04	214.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.36	34.62	22.62	26.99	53.27	53.92	402.40	50.79	52.04	29.61	30.94	17.41
Movement LOS	C	C	C	C	D	D	F	D	D	C	C	B
d_A, Approach Delay [s/veh]	29.37			50.99			168.06			27.49		
Approach LOS	C			D			F			C		
d_I, Intersection Delay [s/veh]	102.79											
Intersection LOS	F											
Intersection V/C	1.164											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.619

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	100	80	80	110	50	70	850	20	20	760	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	100	80	80	110	50	70	850	20	20	760	10
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	29	24	23	32	14	19	234	6	5	202	3
Total Analysis Volume [veh/h]	35	118	94	92	126	57	77	937	22	21	809	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	57	57	57	57
g / C, Green / Cycle	0.27	0.27	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.18	0.25	0.37	0.37	0.27	0.27
s, saturation flow rate [veh/h]	1407	1105	1288	1512	1599	1516
c, Capacity [veh/h]	421	348	859	954	1051	956
d1, Uniform Delay [s]	28.86	32.38	9.15	9.73	8.25	8.39
k, delay calibration	0.11	0.25	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.30	8.99	2.57	2.64	1.19	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.59	0.79	0.55	0.59	0.41	0.43
d, Delay for Lane Group [s/veh]	30.16	41.37	11.72	12.37	9.44	9.80
Lane Group LOS	C	D	B	B	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.71	6.61	4.69	6.14	3.91	3.81
50th-Percentile Queue Length [ft]	117.84	165.33	117.21	153.58	97.64	95.20
95th-Percentile Queue Length [veh]	8.27	10.83	8.24	10.21	7.03	6.85
95th-Percentile Queue Length [ft]	206.86	270.77	205.99	255.20	175.76	171.36



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.16	30.16	30.16	41.37	41.37	41.37	11.72	12.09	12.37	9.44	9.62	9.80
Movement LOS	C	C	C	D	D	D	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	30.16			41.37			12.07			9.61		
Approach LOS	C			D			B			A		
d_I, Intersection Delay [s/veh]	16.43											
Intersection LOS	B											
Intersection V/C	0.619											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	44.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.340

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	610	740	0	40	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	610	740	0	40	30
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	161	204	0	11	9
Total Analysis Volume [veh/h]	0	643	815	0	46	34
Pedestrian Volume [ped/h]	6		5		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.34	0.10
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	44.80	16.15
Movement LOS		A	A		E	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	1.38	0.31
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	34.44	7.84
d_A, Approach Delay [s/veh]	0.00		0.00		32.62	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.70					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	65.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.872

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	470	390	0	130	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	470	390	0	130	110
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	126	108	0	61	52
Total Analysis Volume [veh/h]	0	505	430	0	245	207
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.87	0.36
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	65.56	14.64
Movement LOS		A	A		F	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	7.60	1.61
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	189.97	40.35
d_A, Approach Delay [s/veh]	0.00		0.00		42.24	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	13.77					
Intersection LOS	F					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.409

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	240	10	10	270	30	10	0	0	10	10	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	240	10	10	270	30	10	0	0	10	10	40
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	68	3	3	71	8	10	0	0	3	3	14
Total Analysis Volume [veh/h]	23	272	11	10	283	31	40	0	0	14	14	55
Pedestrian Volume [ped/h]	33			30			12			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	783	793	633	713
Degree of Utilization, x	0.39	0.41	0.06	0.12

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	1.87	2.00	0.20	0.39
95th-Percentile Queue Length [ft]	46.70	50.11	5.05	9.83
Approach Delay [s/veh]	10.52	10.64	9.07	8.71
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.30			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	20	230	0	10	240	20	10	10	10	10	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	230	0	10	240	20	10	10	10	10	0	80
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	72	0	3	64	5	7	7	7	4	0	31
Total Analysis Volume [veh/h]	25	287	0	11	254	21	29	29	29	15	0	124
Pedestrian Volume [ped/h]	8			11			6			25		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	733	735	656	717
Degree of Utilization, x	0.43	0.39	0.13	0.19

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.14	1.85	0.46	0.71
95th-Percentile Queue Length [ft]	53.48	46.26	11.40	17.87
Approach Delay [s/veh]	11.51	10.98	9.33	9.23
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.71			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	63.8
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.268

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	80	230	60	120	70	360	450	80	20	410	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	80	230	60	120	70	360	450	80	20	410	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	24	69	19	38	22	99	123	22	6	117	11
Total Analysis Volume [veh/h]	48	96	276	77	153	89	394	493	88	23	469	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	29	50	50	3	24	24
g / C, Green / Cycle	0.30	0.63	0.30	0.30	0.33	0.56	0.56	0.03	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.51	0.18	0.80	0.06	0.22	0.26	0.06	0.02	0.25	0.04
s, saturation flow rate [veh/h]	284	1534	286	1505	1810	1900	1449	1509	1900	1107
c, Capacity [veh/h]	139	967	140	456	593	1065	812	52	507	295
d1, Uniform Delay [s]	29.72	7.48	29.91	23.22	26.01	11.75	9.26	42.61	32.10	25.23
k, delay calibration	0.50	0.04	0.50	0.04	0.50	0.50	0.50	0.04	0.20	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	85.45	0.06	317.91	0.08	5.80	1.45	0.27	2.22	12.45	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

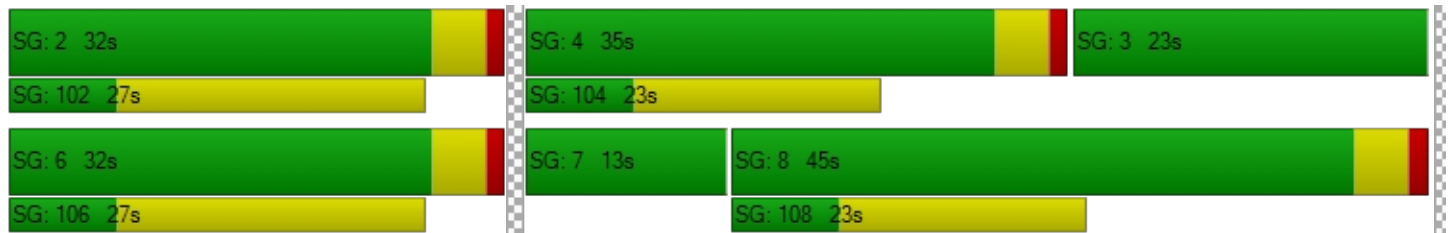
X, volume / capacity	1.03	0.29	1.64	0.20	0.66	0.46	0.11	0.45	0.92	0.16
d, Delay for Lane Group [s/veh]	115.17	7.54	347.82	23.29	31.80	13.20	9.53	44.84	44.55	25.32
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.42	2.23	15.45	1.36	7.98	5.83	0.82	0.53	11.37	0.75
50th-Percentile Queue Length [ft]	160.48	55.68	386.30	34.04	199.38	145.87	20.54	13.21	284.23	18.71
95th-Percentile Queue Length [veh]	10.76	4.01	26.99	2.45	12.61	9.80	1.48	0.95	16.90	1.35
95th-Percentile Queue Length [ft]	269.11	100.23	674.68	61.27	315.17	244.90	36.97	23.78	422.48	33.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	115.17	115.17	7.54	347.82	347.82	23.29	31.80	13.20	9.53	44.84	44.55	25.32
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	44.44			257.28			20.38			42.92		
Approach LOS	D			F			C			D		
d_I, Intersection Delay [s/veh]	63.81											
Intersection LOS	E											
Intersection V/C	1.268											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	50	900	80	210	690	50	290	350	250	40	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	900	80	210	690	50	290	350	250	40	190	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	245	22	55	181	13	77	93	67	12	55	9
Total Analysis Volume [veh/h]	54	980	87	221	725	53	310	374	267	47	221	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	40	40	40	41	41	41	24	24	24
g / C, Green / Cycle	0.30	0.30	0.30	0.45	0.45	0.45	0.45	0.45	0.45	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.06	0.24	0.20	0.04	0.22	0.20	0.17	0.05	0.07	0.07
s, saturation flow rate [veh/h]	717	3618	1436	918	3618	1433	1390	1900	1538	1005	1900	1776
c, Capacity [veh/h]	185	1099	436	383	1623	643	677	854	691	180	495	462
d1, Uniform Delay [s]	35.55	29.97	23.26	19.81	17.14	14.23	16.71	17.01	16.53	38.34	26.47	26.55
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.98	11.01	1.02	6.21	0.89	0.25	2.23	0.13	0.13	0.28	0.10	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.89	0.20	0.58	0.45	0.08	0.46	0.44	0.39	0.26	0.26	0.27
d, Delay for Lane Group [s/veh]	39.53	40.98	24.28	26.02	18.03	14.48	18.93	17.14	16.67	38.63	26.57	26.67
Lane Group LOS	D	D	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.28	11.45	1.47	3.35	5.05	0.63	4.49	5.10	3.54	0.97	2.15	2.11
50th-Percentile Queue Length [ft]	32.10	286.35	36.77	83.84	126.27	15.84	112.25	127.48	88.53	24.26	53.79	52.64
95th-Percentile Queue Length [veh]	2.31	17.00	2.65	6.04	8.74	1.14	7.97	8.80	6.37	1.75	3.87	3.79
95th-Percentile Queue Length [ft]	57.78	425.10	66.19	150.91	218.42	28.51	199.13	220.06	159.36	43.66	96.83	94.75



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	39.53	40.98	24.28	26.02	18.03	14.48	18.93	17.14	16.67	38.63	26.61	26.67
Movement LOS	D	D	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	39.61			19.61			17.59			28.48		
Approach LOS	D			B			B			C		
d_I, Intersection Delay [s/veh]	26.48											
Intersection LOS	C											
Intersection V/C	0.550											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	140	130	40	160	50	100	860	60	20	500	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	140	130	40	160	50	100	860	60	20	500	20
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	40	37	11	46	14	26	225	16	6	150	6
Total Analysis Volume [veh/h]	11	159	147	46	182	57	105	899	63	24	602	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	22	58	51	51	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.65	0.56	0.56	0.65	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.09	0.10	0.04	0.13	0.11	0.26	0.26	0.03	0.17	0.17
s, saturation flow rate [veh/h]	1867	1466	1197	1792	967	1900	1831	713	1900	1861
c, Capacity [veh/h]	507	365	172	446	675	1069	1031	496	999	978
d1, Uniform Delay [s]	27.90	28.23	39.90	29.31	6.31	11.56	11.62	6.64	12.13	12.15
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.14	0.27	0.31	0.37	0.04	1.40	1.49	0.18	0.83	0.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

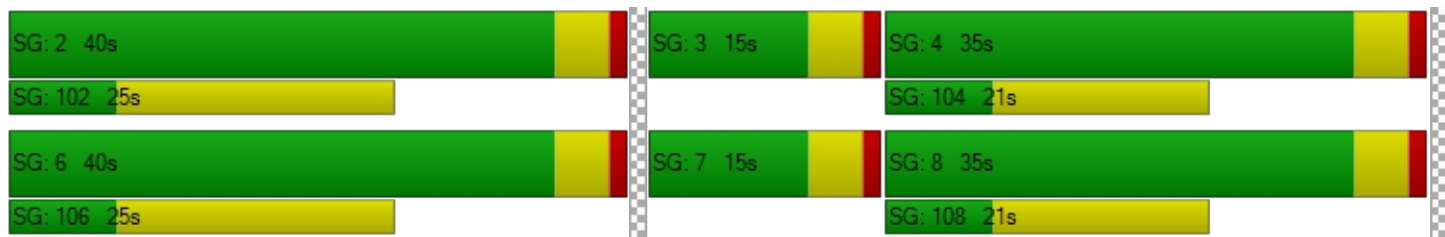
X, volume / capacity	0.34	0.40	0.27	0.54	0.16	0.45	0.46	0.05	0.32	0.32
d, Delay for Lane Group [s/veh]	28.04	28.50	40.21	29.68	6.34	12.96	13.10	6.82	12.96	13.01
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.94	2.58	0.97	4.36	0.67	5.69	5.61	0.17	3.63	3.59
50th-Percentile Queue Length [ft]	73.53	64.58	24.22	109.02	16.67	142.32	140.22	4.23	90.63	89.84
95th-Percentile Queue Length [veh]	5.29	4.65	1.74	7.79	1.20	9.61	9.49	0.30	6.53	6.47
95th-Percentile Queue Length [ft]	132.36	116.25	43.60	194.65	30.00	240.14	237.32	7.62	163.13	161.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.04	28.04	28.50	40.21	29.68	29.68	6.34	13.02	13.10	6.82	12.98	13.01
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	28.25			31.38			12.37			12.75		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.99											
Intersection LOS	B											
Intersection V/C	0.398											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	510	190	90	380	180	150	800	190	50	600	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	510	190	90	380	180	150	800	190	50	600	50
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	135	50	24	101	48	39	206	49	14	165	14
Total Analysis Volume [veh/h]	32	540	201	95	402	191	155	826	196	55	661	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	41	41	41	69	59	59	69	58	58
g / C, Green / Cycle	0.25	0.25	0.25	0.34	0.34	0.34	0.58	0.49	0.49	0.58	0.48	0.48
(v / s)_j Volume / Saturation Flow Rate	0.03	0.20	0.22	0.10	0.21	0.13	0.17	0.28	0.29	0.08	0.19	0.19
s, saturation flow rate [veh/h]	998	1900	1640	973	1900	1495	893	1900	1733	713	1900	1835
c, Capacity [veh/h]	115	476	411	273	655	516	516	933	851	390	916	885
d1, Uniform Delay [s]	55.39	42.33	42.96	30.21	32.66	29.52	12.78	21.52	21.75	13.68	19.90	19.94
k, delay calibration	0.04	0.12	0.15	0.19	0.04	0.04	0.44	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.49	3.81	7.30	1.35	0.35	0.16	1.32	2.48	2.89	0.76	1.28	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.81	0.86	0.35	0.61	0.37	0.30	0.57	0.58	0.14	0.40	0.40
d, Delay for Lane Group [s/veh]	55.88	46.15	50.26	31.56	33.01	29.68	14.10	24.00	24.64	14.43	21.18	21.28
Lane Group LOS	E	D	D	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.96	11.26	10.79	2.00	9.73	4.18	2.08	10.92	10.42	0.71	6.77	6.62
50th-Percentile Queue Length [ft]	24.05	281.56	269.83	50.09	243.27	104.38	52.02	272.97	260.48	17.87	169.18	165.49
95th-Percentile Queue Length [veh]	1.73	16.77	16.18	3.61	14.85	7.52	3.75	16.34	15.71	1.29	11.03	10.84
95th-Percentile Queue Length [ft]	43.29	419.16	404.52	90.16	371.16	187.89	93.64	408.45	392.82	32.17	275.84	270.98

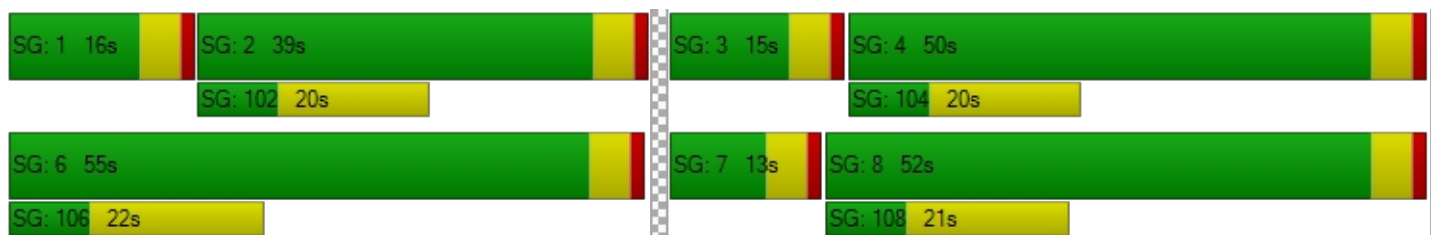


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.88	47.31	50.26	31.56	33.01	29.68	14.10	24.23	24.64	14.43	21.23	21.28
Movement LOS	E	D	D	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	48.43			31.89			22.96			20.74		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	30.04											
Intersection LOS	C											
Intersection V/C	0.554											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	42.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	130	420	50	160	230	80	200	940	160	50	830	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	420	50	160	230	80	200	940	160	50	830	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	120	14	45	65	22	52	242	41	13	221	8
Total Analysis Volume [veh/h]	149	482	57	180	258	90	206	970	165	53	884	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	10	47	47	15	63	63	43	43	43
g / C, Green / Cycle	0.27	0.27	0.27	0.09	0.40	0.40	0.13	0.53	0.53	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.14	0.25	0.04	0.10	0.14	0.06	0.11	0.31	0.32	0.11	0.24	0.24
s, saturation flow rate [veh/h]	1079	1900	1405	1810	1900	1437	1810	1900	1725	504	1900	1862
c, Capacity [veh/h]	231	514	380	157	751	568	233	1003	911	120	685	671
d1, Uniform Delay [s]	49.30	42.79	33.29	54.78	25.37	23.39	51.35	19.24	19.71	51.92	32.38	32.47
k, delay calibration	0.04	0.23	0.04	0.20	0.04	0.04	0.13	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	15.77	0.07	92.10	0.10	0.05	12.06	2.43	3.03	11.24	5.22	5.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.65	0.94	0.15	1.15	0.34	0.16	0.88	0.58	0.61	0.44	0.67	0.68
d, Delay for Lane Group [s/veh]	50.43	58.56	33.36	146.88	25.47	23.44	63.41	21.67	22.75	63.16	37.60	37.91
Lane Group LOS	D	E	C	F	C	C	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.38	15.95	1.27	8.71	5.11	1.64	6.86	11.40	11.28	1.94	12.20	12.12
50th-Percentile Queue Length [ft]	109.61	398.72	31.68	217.87	127.73	41.10	171.48	285.02	281.99	48.56	305.08	302.92
95th-Percentile Queue Length [veh]	7.82	22.50	2.28	14.22	8.82	2.96	11.15	16.94	16.79	3.50	17.93	17.83
95th-Percentile Queue Length [ft]	195.46	562.46	57.02	355.59	220.40	73.97	278.86	423.46	419.69	87.41	448.31	445.63

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	50.43	58.56	33.36	146.88	25.47	23.44	63.41	22.10	22.75	63.16	37.75	37.91
Movement LOS	D	E	C	F	C	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	54.71			66.51			28.53			39.15		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	42.24											
Intersection LOS	D											
Intersection V/C	0.711											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			┌			┌┌┌			┌┌┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	40	230	156	80	140	160	1180	240	30	930	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	40	230	156	80	140	160	1180	240	30	930	30
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	11	64	44	25	44	42	313	64	8	258	8
Total Analysis Volume [veh/h]	23	45	257	175	101	177	170	1251	254	33	1034	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	13	72	72	5	64	64
g / C, Green / Cycle	0.25	0.25	0.11	0.60	0.60	0.04	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.19	0.23	0.09	0.40	0.42	0.02	0.45	0.28
s, saturation flow rate [veh/h]	1602	1200	1810	1900	1755	1810	1200	1871
c, Capacity [veh/h]	393	294	197	1141	1054	71	637	994
d1, Uniform Delay [s]	42.10	44.46	52.55	15.97	16.55	56.37	23.83	18.39
k, delay calibration	0.13	0.25	0.12	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	26.00	11.88	3.12	3.93	1.77	12.73	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.77	0.95	0.86	0.67	0.70	0.47	0.84	0.53
d, Delay for Lane Group [s/veh]	45.86	70.46	64.43	19.09	20.48	58.13	36.55	20.45
Lane Group LOS	D	E	E	B	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.69	10.18	5.68	14.29	14.54	1.01	14.62	10.01
50th-Percentile Queue Length [ft]	217.33	254.42	141.96	357.16	363.55	25.35	365.51	250.32
95th-Percentile Queue Length [veh]	13.53	15.41	9.59	20.49	20.80	1.83	20.89	15.20
95th-Percentile Queue Length [ft]	338.21	385.22	239.65	512.13	519.90	45.63	522.28	380.05

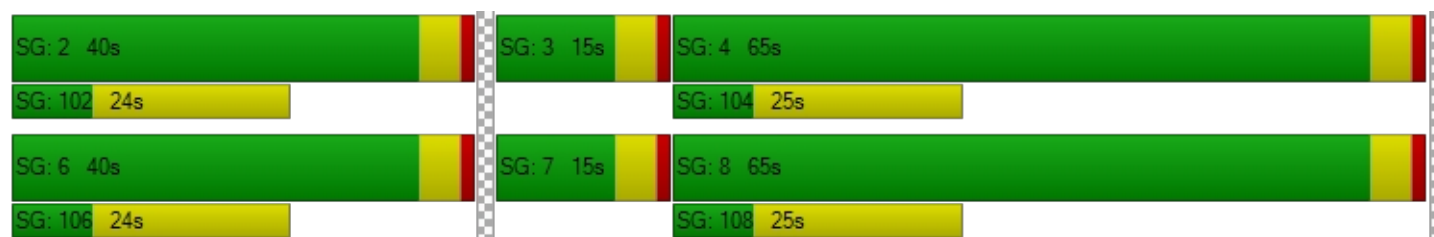


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	45.86	45.86	0.00	70.46	70.46	64.43	19.63	20.48	58.13	28.80	20.45
Movement LOS		D	D		E	E	E	B	C	E	C	C
d_A, Approach Delay [s/veh]	45.86		70.46		24.31			29.43				
Approach LOS	D		E		C			C				
d_I, Intersection Delay [s/veh]	31.75											
Intersection LOS	C											
Intersection V/C	0.773											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	60.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.911

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	260	280	860	200	740	0	0	1190	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	260	280	860	200	740	0	0	1190	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	69	74	228	53	195	0	0	309	10
Total Analysis Volume [veh/h]	0	0	0	276	297	912	210	779	0	0	1237	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	16	75	55	55
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.13	0.63	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.32	0.29	0.12	0.22	0.47	0.47
s, saturation flow rate [veh/h]	1810	1900	1418	1559	1810	3618	1800	900
c, Capacity [veh/h]	534	561	419	460	237	2272	826	413
d1, Uniform Delay [s]	35.14	35.30	42.25	42.10	51.20	10.56	32.44	32.44
k, delay calibration	0.04	0.04	0.50	0.43	0.09	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.29	70.24	36.81	9.18	0.41	40.00	52.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.52	0.53	1.09	0.99	0.89	0.34	1.03	1.03
d, Delay for Lane Group [s/veh]	35.43	35.59	112.4	78.91	60.38	10.97	72.45	85.39
Lane Group LOS	D	D	F	E	E	B	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	6.53	7.06	20.00	17.54	6.80	4.85	16.15	17.63
50th-Percentile Queue Length [ft]	163.2	176.4	499.9	438.5	169.89	121.16	403.65	440.76
95th-Percentile Queue Length [veh]	10.72	11.41	28.81	24.41	11.07	8.46	23.27	25.10
95th-Percentile Queue Length [ft]	268.0	285.3	720.2	610.3	276.77	211.43	581.71	627.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.43	35.59	95.70	60.38	10.97	0.00	0.00	76.47	85.39
Movement LOS				D	D	F	E	B			E	F
d_A, Approach Delay [s/veh]	0.00			72.48			21.47			76.76		
Approach LOS	A			E			C			E		
d_I, Intersection Delay [s/veh]	60.49											
Intersection LOS	E											
Intersection V/C	0.911											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	108.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.086

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤵⤴⤵						⤵⤴⤵			⤵⤴⤵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	180	270	220	0	0	0	0	760	510	550	1250	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	270	220	0	0	0	0	760	510	550	1250	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	81	66	0	0	0	0	202	136	147	333	0
Total Analysis Volume [veh/h]	216	324	264	0	0	0	0	808	542	586	1333	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22		70	70	70	14	89
g / C, Green / Cycle	0.18	0.18	0.18		0.59	0.59	0.59	0.11	0.74
(v / s)_j Volume / Saturation Flow Rate	0.15	0.15	0.17		0.19	0.22	0.68	0.24	0.37
s, saturation flow rate [veh/h]	1829	1729	1580		3618	1557	500	2400	3618
c, Capacity [veh/h]	337	319	291		2119	912	293	276	2673
d1, Uniform Delay [s]	47.07	47.06	47.93		12.66	13.15	24.86	53.10	6.47
k, delay calibration	0.09	0.09	0.15		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.46	4.65	13.27		0.03	0.09	100.36	517.88	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.82	0.91		0.32	0.37	1.15	2.12	0.50
d, Delay for Lane Group [s/veh]	51.53	51.71	61.19		12.69	13.24	125.22	570.98	7.14
Lane Group LOS	D	D	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	8.30	7.86	8.71		4.44	4.63	15.72	23.99	6.39
50th-Percentile Queue Length [ft]	207.56	196.40	217.63		111.05	115.68	392.90	599.87	159.65
95th-Percentile Queue Length [veh]	13.03	12.45	13.54		7.90	8.15	24.56	39.12	10.53
95th-Percentile Queue Length [ft]	325.70	311.31	338.60		197.46	203.87	613.92	977.99	263.26



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.53	51.67	61.19	0.00	0.00	0.00	0.00	12.69	82.97	570.98	7.14	0.00
Movement LOS	D	D	E					B	F	F	A	
d_A, Approach Delay [s/veh]	54.76			0.00			40.96			179.32		
Approach LOS	D			A			D			F		
d_I, Intersection Delay [s/veh]	108.87											
Intersection LOS	F											
Intersection V/C	1.086											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	60	350	80	130	1050	130	90	1090	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	60	350	80	130	1050	130	90	1090	80
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	17	100	23	38	307	38	24	293	21
Total Analysis Volume [veh/h]	107	437	139	69	401	92	152	1227	152	97	1171	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	6	27	27	10	58	58	8	55	55
g / C, Green / Cycle	0.07	0.25	0.25	0.05	0.23	0.23	0.09	0.48	0.48	0.07	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.04	0.13	0.14	0.08	0.34	0.10	0.05	0.32	0.05
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1741	1810	3618	1564	1810	3618	1577
c, Capacity [veh/h]	133	478	397	89	432	396	157	1738	752	121	1667	727
d1, Uniform Delay [s]	54.79	43.67	36.87	56.41	41.32	41.54	54.65	24.51	17.94	55.20	25.80	18.45
k, delay calibration	0.04	0.16	0.11	0.04	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	10.27	0.53	5.29	1.26	1.49	26.28	2.44	0.61	4.49	2.50	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

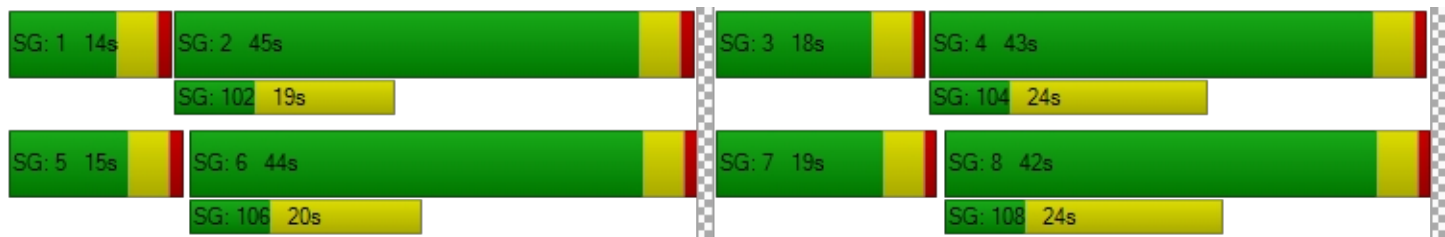
X, volume / capacity	0.81	0.91	0.35	0.77	0.59	0.61	0.97	0.71	0.20	0.80	0.70	0.12
d, Delay for Lane Group [s/veh]	59.13	53.94	37.40	61.70	42.59	43.03	80.93	26.95	18.55	59.69	28.30	18.79
Lane Group LOS	E	D	D	E	D	D	F	C	B	E	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	13.76	3.39	2.18	6.77	6.46	5.68	13.77	2.52	3.02	13.44	1.42
50th-Percentile Queue Length [ft]	83.01	344.06	84.71	54.55	169.16	161.58	142.07	344.24	62.92	75.52	336.02	35.46
95th-Percentile Queue Length [veh]	5.98	19.85	6.10	3.93	11.03	10.63	9.59	19.86	4.53	5.44	19.45	2.55
95th-Percentile Queue Length [ft]	149.41	496.15	152.47	98.18	275.82	265.82	239.80	496.38	113.26	135.94	486.33	63.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	53.94	37.40	61.70	42.75	43.03	80.93	26.95	18.55	59.69	28.30	18.79
Movement LOS	E	D	D	E	D	D	F	C	B	E	C	B
d_A, Approach Delay [s/veh]	51.39			45.12			31.47			29.94		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	36.12											
Intersection LOS	D											
Intersection V/C	0.676											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	40	700	20	140	560	80	100	380	20	80	340	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	700	20	140	560	80	100	380	20	80	340	20
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	188	5	38	151	22	27	102	5	24	103	6
Total Analysis Volume [veh/h]	43	752	21	151	604	86	108	409	22	97	411	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.06	0.20	0.20	0.21	0.19	0.19	0.11	0.22	0.01	0.10	0.23
s, saturation flow rate [veh/h]	764	1900	1877	705	1900	1807	965	1900	1571	989	1879
c, Capacity [veh/h]	390	1007	995	358	1007	957	225	675	558	246	667
d1, Uniform Delay [s]	15.62	11.11	11.12	19.59	10.85	10.87	33.30	21.20	16.87	31.49	21.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	1.12	1.14	3.63	0.96	1.02	0.59	0.33	0.01	0.38	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.39	0.39	0.42	0.35	0.35	0.48	0.61	0.04	0.39	0.65
d, Delay for Lane Group [s/veh]	16.19	12.23	12.26	23.22	11.81	11.89	33.89	21.53	16.88	31.87	22.05
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	4.00	3.97	2.45	3.54	3.41	1.98	5.91	0.25	1.71	6.43
50th-Percentile Queue Length [ft]	13.62	99.99	99.24	61.35	88.44	85.18	49.58	147.84	6.30	42.66	160.76
95th-Percentile Queue Length [veh]	0.98	7.20	7.15	4.42	6.37	6.13	3.57	9.90	0.45	3.07	10.59
95th-Percentile Queue Length [ft]	24.51	179.98	178.64	110.43	159.18	153.33	89.25	247.54	11.35	76.78	264.73



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.19	12.24	12.26	23.22	11.84	11.89	33.89	21.53	16.88	31.87	22.05	22.05
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	12.45			13.89			23.82			23.84		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.36											
Intersection LOS	B											
Intersection V/C	0.446											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	580	40	50	610	50	20	250	50	110	500	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	580	40	50	610	50	20	250	50	110	500	140
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	161	11	13	164	13	6	73	15	30	135	38
Total Analysis Volume [veh/h]	100	643	44	54	654	54	23	291	58	119	539	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	30	30	30	30	30
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.13	0.18	0.18	0.07	0.19	0.19	0.03	0.19	0.11	0.28	0.10
s, saturation flow rate [veh/h]	751	1900	1849	767	1900	1841	880	1831	1045	1900	1578
c, Capacity [veh/h]	407	1070	1041	417	1070	1037	127	612	246	635	528
d1, Uniform Delay [s]	16.58	10.50	10.51	15.24	10.58	10.59	41.41	24.62	35.89	27.82	22.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.13	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.44	0.81	0.83	0.64	0.84	0.88	0.25	0.31	0.55	3.79	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	0.32	0.33	0.13	0.33	0.34	0.18	0.57	0.48	0.85	0.29
d, Delay for Lane Group [s/veh]	18.01	11.31	11.35	15.88	11.42	11.47	41.66	24.94	36.44	31.61	22.15
Lane Group LOS	B	B	B	B	B	B	D	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.43	3.55	3.48	0.71	3.69	3.61	0.49	5.90	2.45	10.87	2.28
50th-Percentile Queue Length [ft]	35.75	88.64	87.01	17.67	92.25	90.24	12.37	147.42	61.14	271.66	56.98
95th-Percentile Queue Length [veh]	2.57	6.38	6.26	1.27	6.64	6.50	0.89	9.88	4.40	16.27	4.10
95th-Percentile Queue Length [ft]	64.36	159.55	156.61	31.81	166.04	162.44	22.27	246.98	110.05	406.82	102.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.01	11.33	11.35	15.88	11.44	11.47	41.66	24.94	24.94	36.44	31.61	22.15
Movement LOS	B	B	B	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.18			11.76			25.97			30.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.39											
Intersection LOS	B											
Intersection V/C	0.474											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	450	40	90	350	60	80	190	40	30	100	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	450	40	90	350	60	80	190	40	30	100	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	126	11	23	91	16	21	50	10	8	27	13
Total Analysis Volume [veh/h]	56	503	45	94	365	63	83	198	42	32	107	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.30	0.11	0.24	0.19	0.08	0.04
s, saturation flow rate [veh/h]	949	1845	872	1796	1674	1717	1505
c, Capacity [veh/h]	315	772	243	752	793	810	645
d1, Uniform Delay [s]	20.17	14.47	24.86	13.35	11.94	10.59	10.18
k, delay calibration	0.04	0.08	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.95	0.38	0.25	1.55	0.46	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.71	0.39	0.57	0.41	0.17	0.08
d, Delay for Lane Group [s/veh]	20.27	15.42	25.23	13.61	13.49	11.05	10.44
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	5.54	1.23	3.90	2.94	1.10	0.42
50th-Percentile Queue Length [ft]	15.68	138.38	30.84	97.39	73.61	27.47	10.43
95th-Percentile Queue Length [veh]	1.13	9.39	2.22	7.01	5.30	1.98	0.75
95th-Percentile Queue Length [ft]	28.23	234.84	55.52	175.30	132.50	49.44	18.78

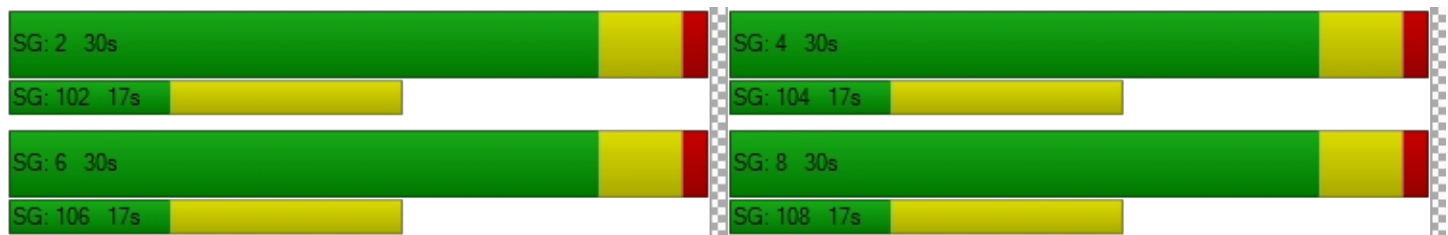


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.27	15.42	15.42	25.23	13.61	13.61	13.49	13.49	13.49	11.05	11.05	10.44
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.87			15.70			13.49			10.88		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.76											
Intersection LOS	B											
Intersection V/C	0.490											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.518

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	970	10	50	950	70	70	390	100	80	290	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	970	10	50	950	70	70	390	100	80	290	70
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	276	3	13	254	19	19	105	27	24	88	21
Total Analysis Volume [veh/h]	80	1104	11	54	1017	75	75	419	107	97	352	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.15	0.29	0.29	0.11	0.29	0.30	0.07	0.22	0.07	0.10	0.19	0.06
s, saturation flow rate [veh/h]	521	1900	1891	512	1900	1815	1009	1900	1547	973	1900	1465
c, Capacity [veh/h]	258	1026	1021	257	1026	980	260	655	533	218	655	505
d1, Uniform Delay [s]	21.65	11.97	11.98	20.33	11.92	12.03	29.87	22.02	18.44	33.46	21.07	18.22
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.09	2.07	2.09	1.86	2.02	2.22	0.23	0.39	0.07	0.53	0.26	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

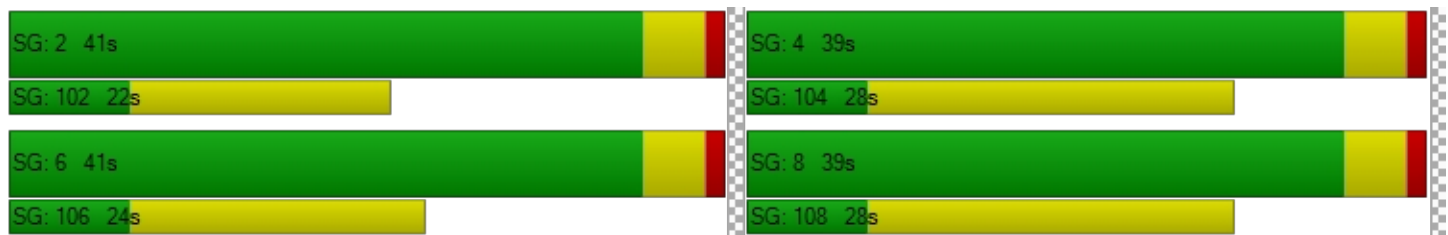
X, volume / capacity	0.31	0.54	0.54	0.21	0.54	0.55	0.29	0.64	0.20	0.44	0.54	0.17
d, Delay for Lane Group [s/veh]	24.74	14.05	14.07	22.18	13.94	14.26	30.09	22.41	18.51	33.99	21.32	18.28
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.35	6.22	6.21	0.85	6.12	6.08	1.28	6.34	1.35	1.82	5.18	1.08
50th-Percentile Queue Length [ft]	33.78	155.59	155.27	21.25	153.11	151.88	31.95	158.40	33.74	45.53	129.49	27.00
95th-Percentile Queue Length [veh]	2.43	10.32	10.30	1.53	10.18	10.12	2.30	10.46	2.43	3.28	8.91	1.94
95th-Percentile Queue Length [ft]	60.80	257.88	257.45	38.25	254.58	252.94	57.51	261.60	60.74	81.96	222.79	48.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.74	14.06	14.07	22.18	14.09	14.26	30.09	22.41	18.51	33.99	21.32	18.28
Movement LOS	C	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	14.77			14.48			22.67			23.14		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.33											
Intersection LOS	B											
Intersection V/C	0.518											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.591

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	150	60	70	120	60	50	460	60	20	300	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	150	60	70	120	60	50	460	60	20	300	20
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	41	17	22	38	19	13	122	16	5	80	5
Total Analysis Volume [veh/h]	22	166	66	89	153	76	53	487	64	21	320	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.28	0.33	0.05	0.05	0.26	0.04	0.02	0.17	0.01
s, saturation flow rate [veh/h]	906	722	1579	1068	1900	1537	921	1900	1540
c, Capacity [veh/h]	358	308	538	552	1034	836	429	1034	838
d1, Uniform Delay [s]	21.38	23.28	18.25	13.57	11.18	8.68	16.32	10.00	8.43
k, delay calibration	0.30	0.42	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.05	15.42	0.12	0.35	1.54	0.18	0.22	0.78	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.71	0.79	0.14	0.10	0.47	0.08	0.05	0.31	0.03
d, Delay for Lane Group [s/veh]	28.43	38.70	18.37	13.91	12.72	8.86	16.54	10.78	8.49
Lane Group LOS	C	D	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	4.11	5.28	0.94	0.60	5.20	0.53	0.27	3.02	0.17
50th-Percentile Queue Length [ft]	102.71	131.89	23.43	14.92	130.00	13.17	6.64	75.48	4.19
95th-Percentile Queue Length [veh]	7.40	9.04	1.69	1.07	8.94	0.95	0.48	5.43	0.30
95th-Percentile Queue Length [ft]	184.88	226.06	42.18	26.86	223.50	23.70	11.95	135.87	7.54



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.43	28.43	28.43	38.70	38.70	18.37	13.91	12.72	8.86	16.54	10.78	8.49
Movement LOS	C	C	C	D	D	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	28.43			33.84			12.42			10.98		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.15											
Intersection LOS	B											
Intersection V/C	0.591											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.462

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	680	100	120	570	100	30	420	70	80	290	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	680	100	120	570	100	30	420	70	80	290	30
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	183	27	31	149	26	8	111	19	21	76	8
Total Analysis Volume [veh/h]	54	732	108	126	598	105	32	444	74	84	303	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	27	27	27	27	27	27
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.07	0.23	0.23	0.19	0.19	0.19	0.03	0.23	0.05	0.09	0.16	0.02
s, saturation flow rate [veh/h]	753	1900	1799	664	1900	1782	1080	1900	1554	955	1900	1548
c, Capacity [veh/h]	399	1028	973	345	1028	964	295	653	534	199	653	532
d1, Uniform Delay [s]	14.95	10.88	10.91	18.68	10.40	10.43	27.03	22.46	18.07	34.42	20.48	17.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	1.25	1.34	2.96	0.94	1.03	0.06	1.24	0.04	0.53	0.19	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.42	0.42	0.36	0.35	0.36	0.11	0.68	0.14	0.42	0.46	0.06
d, Delay for Lane Group [s/veh]	15.65	12.13	12.26	21.65	11.34	11.45	27.09	23.71	18.12	34.95	20.67	17.58
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.67	4.40	4.24	1.96	3.52	3.37	0.50	7.01	0.92	1.58	4.26	0.37
50th-Percentile Queue Length [ft]	16.76	110.12	106.07	48.97	87.89	84.17	12.59	175.29	22.91	39.46	106.41	9.32
95th-Percentile Queue Length [veh]	1.21	7.85	7.62	3.53	6.33	6.06	0.91	11.35	1.65	2.84	7.64	0.67
95th-Percentile Queue Length [ft]	30.18	196.17	190.52	88.14	158.20	151.51	22.67	283.86	41.24	71.03	191.00	16.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.65	12.18	12.26	21.65	11.38	11.45	27.09	23.71	18.12	34.95	20.67	17.58
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	12.40			12.95			23.15			23.31		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.46											
Intersection LOS	B											
Intersection V/C	0.462											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.444

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	50	380	50	110	340	70	10	410	50	80	340	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	380	50	110	340	70	10	410	50	80	340	60
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	98	13	30	93	19	3	113	14	22	94	17
Total Analysis Volume [veh/h]	52	394	52	120	372	77	11	450	55	89	378	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	25	25	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.05	0.21	0.03	0.12	0.20	0.05	0.01	0.24	0.04	0.09	0.20	0.04
s, saturation flow rate [veh/h]	1019	1900	1562	1003	1900	1538	1013	1900	1527	947	1900	1558
c, Capacity [veh/h]	476	962	791	461	962	778	272	689	553	223	689	565
d1, Uniform Delay [s]	14.83	10.77	8.83	16.43	10.62	8.99	24.57	18.64	14.76	29.47	17.76	14.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	1.29	0.16	1.37	1.18	0.25	0.02	0.42	0.03	0.43	0.25	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.41	0.07	0.26	0.39	0.10	0.04	0.65	0.10	0.40	0.55	0.12
d, Delay for Lane Group [s/veh]	15.29	12.06	8.99	17.79	11.79	9.24	24.59	19.05	14.78	29.90	18.01	14.90
Lane Group LOS	B	B	A	B	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.57	3.57	0.38	1.45	3.31	0.58	0.15	5.70	0.55	1.41	4.54	0.67
50th-Percentile Queue Length [ft]	14.14	89.15	9.59	36.32	82.78	14.50	3.75	142.41	13.70	35.33	113.59	16.81
95th-Percentile Queue Length [veh]	1.02	6.42	0.69	2.62	5.96	1.04	0.27	9.61	0.99	2.54	8.04	1.21
95th-Percentile Queue Length [ft]	25.45	160.47	17.27	65.38	149.00	26.10	6.75	240.26	24.66	63.59	200.99	30.25

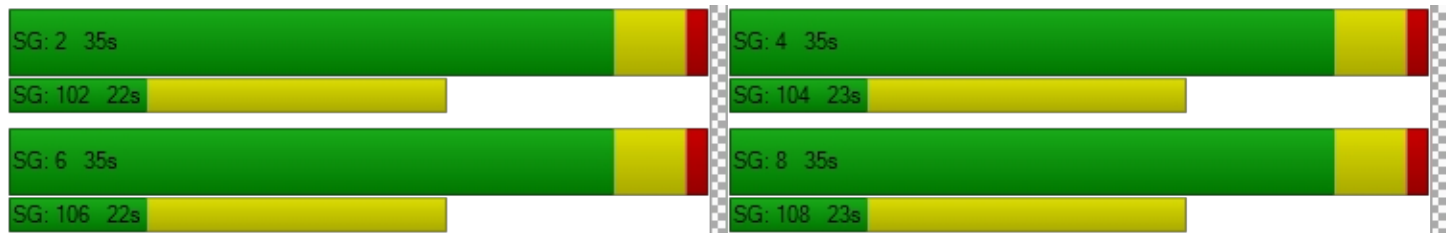


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.29	12.06	8.99	17.79	11.79	9.24	24.59	19.05	14.78	29.90	18.01	14.90
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.08			12.71			18.72			19.60		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.77											
Intersection LOS	B											
Intersection V/C	0.444											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	400	60	160	740	70	20	310	160	110	450	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	400	60	160	740	70	20	310	160	110	450	10
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	106	16	42	195	18	6	93	48	30	122	3
Total Analysis Volume [veh/h]	74	425	64	169	781	74	24	373	192	120	489	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.11	0.13	0.13	0.18	0.23	0.23	0.03	0.20	0.13	0.12	0.26	0.01
s, saturation flow rate [veh/h]	655	1900	1801	918	1900	1831	917	1900	1515	1008	1900	1554
c, Capacity [veh/h]	303	914	867	451	914	881	223	725	578	299	725	593
d1, Uniform Delay [s]	19.03	10.84	10.86	16.53	12.21	12.23	27.16	16.65	15.33	25.75	18.02	13.48
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.91	0.74	0.79	2.37	1.77	1.85	0.08	0.21	0.12	0.32	0.41	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

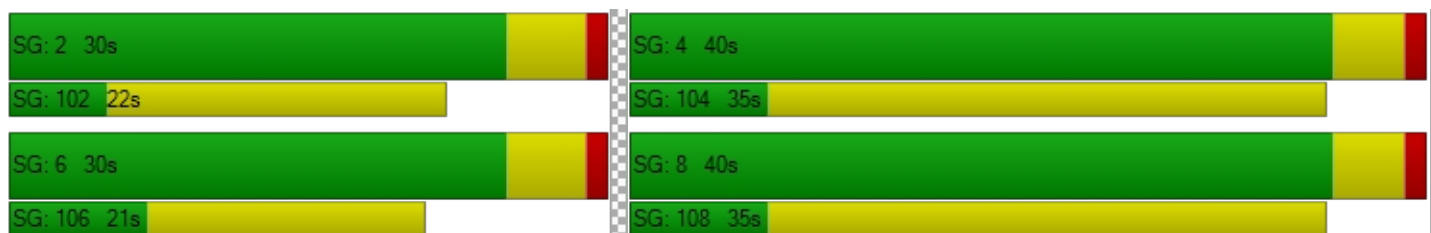
X, volume / capacity	0.24	0.27	0.28	0.37	0.47	0.48	0.11	0.51	0.33	0.40	0.67	0.02
d, Delay for Lane Group [s/veh]	20.94	11.57	11.66	18.90	13.97	14.08	27.24	16.87	15.45	26.08	18.44	13.49
Lane Group LOS	C	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.16	2.64	2.56	2.06	4.12	4.02	0.35	4.28	2.03	1.77	6.10	0.10
50th-Percentile Queue Length [ft]	28.98	65.95	63.90	51.48	102.96	100.51	8.76	107.08	50.72	44.15	152.49	2.55
95th-Percentile Queue Length [veh]	2.09	4.75	4.60	3.71	7.41	7.24	0.63	7.68	3.65	3.18	10.15	0.18
95th-Percentile Queue Length [ft]	52.16	118.71	115.02	92.66	185.33	180.92	15.76	191.93	91.30	79.47	253.75	4.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.94	11.61	11.66	18.90	14.02	14.08	27.24	16.87	15.45	26.08	18.44	13.49
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.84			14.83			16.83			19.83		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.96											
Intersection LOS	B											
Intersection V/C	0.487											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	390	50	60	500	40	90	60	80	40	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	390	50	60	500	40	90	60	80	40	80	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	102	13	16	134	11	29	19	26	12	23	6
Total Analysis Volume [veh/h]	42	408	52	64	535	43	115	77	102	46	93	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	14	14	14	8	8
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.25	0.07	0.28	0.03	0.19	0.10
s, saturation flow rate [veh/h]	861	1840	923	1900	1486	1573	1694
c, Capacity [veh/h]	364	805	405	831	650	584	604
d1, Uniform Delay [s]	11.74	6.63	11.05	6.92	5.12	10.10	9.20
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.24	0.07	0.31	0.02	0.25	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.57	0.16	0.64	0.07	0.50	0.27
d, Delay for Lane Group [s/veh]	11.80	6.87	11.12	7.23	5.14	10.35	9.28
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.28	0.29	1.56	0.09	1.19	0.59
50th-Percentile Queue Length [ft]	5.04	31.95	7.32	38.98	2.28	29.68	14.77
95th-Percentile Queue Length [veh]	0.36	2.30	0.53	2.81	0.16	2.14	1.06
95th-Percentile Queue Length [ft]	9.07	57.50	13.17	70.16	4.11	53.42	26.58

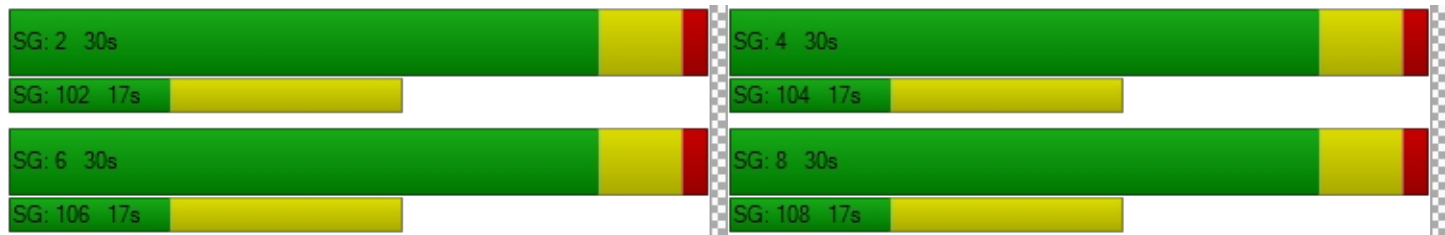


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.80	6.87	6.87	11.12	7.23	5.14	10.35	10.35	10.35	9.28	9.28	9.28
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.28			7.48			10.35			9.28		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.13											
Intersection LOS	A											
Intersection V/C	0.469											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	70	1110	60	90	1130	20	90	280	70	50	160	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1110	60	90	1130	20	90	280	70	50	160	30
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	299	16	24	306	5	23	73	18	13	42	8
Total Analysis Volume [veh/h]	75	1197	65	97	1222	22	93	291	73	52	167	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.17	0.33	0.34	0.22	0.33	0.33	0.08	0.20	0.05	0.11
s, saturation flow rate [veh/h]	454	1900	1857	446	1900	1882	1191	1820	1027	1839
c, Capacity [veh/h]	258	1132	1106	252	1132	1121	305	527	181	532
d1, Uniform Delay [s]	19.07	9.83	9.87	20.79	9.74	9.75	29.15	25.25	34.99	22.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.84	2.02	2.10	4.42	1.93	1.97	0.21	0.61	0.32	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

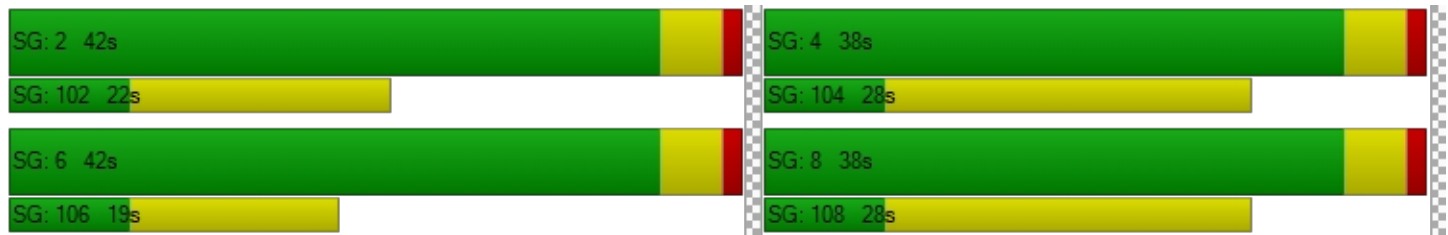
X, volume / capacity	0.29	0.56	0.57	0.39	0.55	0.55	0.31	0.69	0.29	0.37
d, Delay for Lane Group [s/veh]	21.91	11.85	11.96	25.20	11.67	11.72	29.36	25.86	35.31	22.80
Lane Group LOS	C	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.18	6.24	6.18	1.73	6.47	6.46	1.54	5.87	0.96	2.84
50th-Percentile Queue Length [ft]	29.56	155.96	154.54	43.36	161.77	161.40	38.57	146.63	23.89	71.01
95th-Percentile Queue Length [veh]	2.13	10.33	10.26	3.12	10.64	10.62	2.78	9.84	1.72	5.11
95th-Percentile Queue Length [ft]	53.21	258.36	256.47	78.04	266.06	265.58	69.42	245.92	43.00	127.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.91	11.90	11.96	25.20	11.70	11.72	29.36	25.86	25.86	35.31	22.80	22.80
Movement LOS	C	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.47			12.67			26.57			25.40		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.41											
Intersection LOS	B											
Intersection V/C	0.537											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	240	100	30	160	70	60	310	50	10	230	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	240	100	30	160	70	60	310	50	10	230	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	76	31	9	49	22	16	83	13	3	66	3
Total Analysis Volume [veh/h]	25	302	126	37	197	86	65	333	54	12	265	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	48	48	48	48
g / C, Green / Cycle	0.28	0.28	0.28	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.26	0.17	0.06	0.23	0.04	0.15	0.01
s, saturation flow rate [veh/h]	1764	1417	1549	1735	1539	1875	1558
c, Capacity [veh/h]	540	448	432	1103	932	1182	943
d1, Uniform Delay [s]	27.79	23.63	21.94	7.85	6.43	7.27	6.25
k, delay calibration	0.25	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.88	0.95	0.22	0.92	0.12	0.47	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.84	0.52	0.20	0.36	0.06	0.23	0.01
d, Delay for Lane Group [s/veh]	35.67	24.58	22.16	8.77	6.55	7.73	6.28
Lane Group LOS	D	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.01	3.55	1.20	3.13	0.35	1.99	0.07
50th-Percentile Queue Length [ft]	225.23	88.78	29.96	78.22	8.68	49.67	1.87
95th-Percentile Queue Length [veh]	13.93	6.39	2.16	5.63	0.63	3.58	0.13
95th-Percentile Queue Length [ft]	348.29	159.80	53.93	140.80	15.63	89.41	3.37

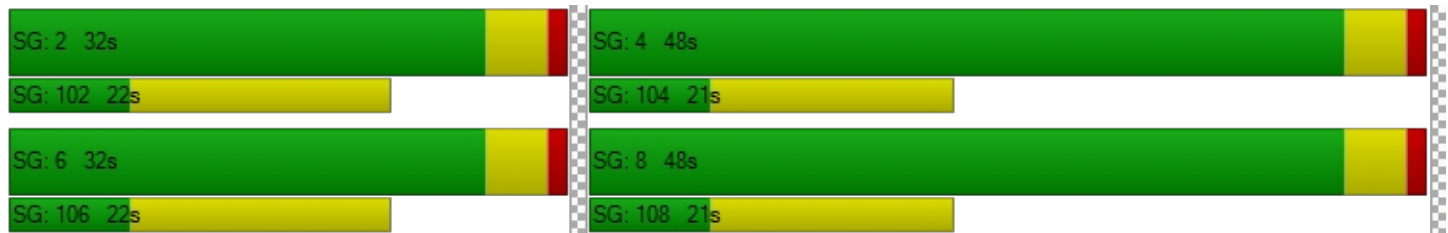


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.67	35.67	35.67	24.58	24.58	22.16	8.77	8.77	6.55	7.73	7.73	6.28
Movement LOS	D	D	D	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.67			23.93			8.50			7.67		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	19.73											
Intersection LOS	B											
Intersection V/C	0.486											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	900	90	40	820	60	20	310	50	90	270	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	900	90	40	820	60	20	310	50	90	270	50
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	234	23	11	218	16	6	86	14	24	73	14
Total Analysis Volume [veh/h]	42	935	93	42	870	64	22	342	55	98	293	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.07	0.27	0.28	0.08	0.25	0.25	0.02	0.22	0.10	0.19
s, saturation flow rate [veh/h]	608	1900	1825	556	1900	1846	1039	1846	1000	1835
c, Capacity [veh/h]	322	1044	1003	290	1044	1014	244	620	211	616
d1, Uniform Delay [s]	16.41	11.20	11.23	17.73	10.81	10.82	29.62	22.48	34.24	21.76
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.07	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.71	1.81	1.05	1.42	1.47	0.06	0.67	0.59	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.50	0.50	0.14	0.45	0.45	0.09	0.64	0.46	0.56
d, Delay for Lane Group [s/veh]	17.25	12.91	13.05	18.78	12.23	12.30	29.68	23.16	34.83	22.07
Lane Group LOS	B	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.57	5.64	5.51	0.60	4.91	4.81	0.36	6.00	1.82	5.03
50th-Percentile Queue Length [ft]	14.13	141.06	137.68	15.01	122.70	120.25	8.97	149.95	45.40	125.71
95th-Percentile Queue Length [veh]	1.02	9.54	9.36	1.08	8.54	8.41	0.65	10.01	3.27	8.71
95th-Percentile Queue Length [ft]	25.43	238.45	233.90	27.02	213.53	210.18	16.15	250.36	81.72	217.65

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.25	12.97	13.05	18.78	12.26	12.30	29.68	23.16	23.16	34.83	22.07	22.07
Movement LOS	B	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.14			12.54			23.50			24.88		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.23											
Intersection LOS	B											
Intersection V/C	0.492											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	30	480	60	50	460	20	20	330	30	120	250	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	480	60	50	460	20	20	330	30	120	250	50
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	122	15	14	124	5	6	95	9	33	69	14
Total Analysis Volume [veh/h]	30	486	61	54	497	22	23	382	35	132	276	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.06	0.26	0.01	0.02	0.22	0.14	0.18
s, saturation flow rate [veh/h]	912	1900	1551	920	1900	1568	1041	1860	978	1804
c, Capacity [veh/h]	365	944	771	372	944	779	316	691	264	671
d1, Uniform Delay [s]	18.40	11.91	9.22	18.62	12.00	8.99	22.64	17.81	28.25	16.92
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.44	2.00	0.20	0.82	2.10	0.07	0.04	0.32	0.55	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.51	0.08	0.15	0.53	0.03	0.07	0.60	0.50	0.49
d, Delay for Lane Group [s/veh]	18.84	13.91	9.42	19.44	14.10	9.05	22.68	18.13	28.80	17.13
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.38	4.88	0.47	0.70	5.04	0.16	0.29	4.96	2.05	3.73
50th-Percentile Queue Length [ft]	9.46	122.02	11.66	17.39	125.97	4.08	7.35	123.94	51.14	93.29
95th-Percentile Queue Length [veh]	0.68	8.50	0.84	1.25	8.72	0.29	0.53	8.61	3.68	6.72
95th-Percentile Queue Length [ft]	17.02	212.60	20.99	31.30	218.01	7.35	13.22	215.23	92.05	167.93

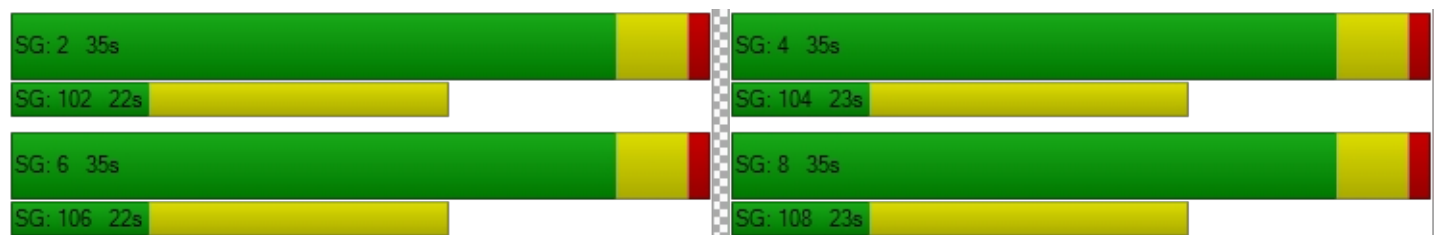


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.84	13.91	9.42	19.44	14.10	9.05	22.68	18.13	18.13	28.80	17.13	17.13
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.69			14.41			18.37			20.46		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.42											
Intersection LOS	B											
Intersection V/C	0.486											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑↔		↔↓		↔↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	530	120	60	500	170	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	530	120	60	500	170	120
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	147	33	16	131	50	36
Total Analysis Volume [veh/h]	588	133	63	523	202	143
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.31	0.09	0.08	0.28	0.11	0.09
s, saturation flow rate [veh/h]	1900	1545	831	1900	1810	1549
c, Capacity [veh/h]	853	693	378	853	419	359
d1, Uniform Delay [s]	6.33	4.79	11.16	6.04	9.56	9.36
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.05	0.08	0.27	0.32	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

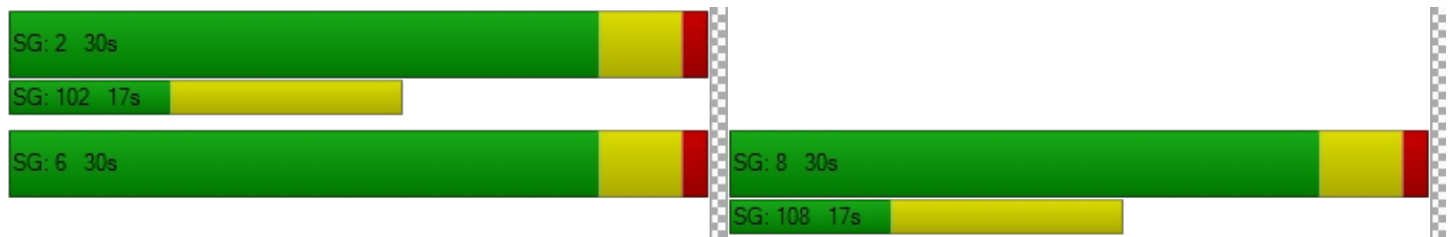
X, volume / capacity	0.69	0.19	0.17	0.61	0.48	0.40
d, Delay for Lane Group [s/veh]	6.71	4.84	11.24	6.30	9.88	9.63
Lane Group LOS	A	A	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.37	0.23	0.27	1.15	0.83	0.58
50th-Percentile Queue Length [ft]	34.33	5.73	6.80	28.80	20.83	14.45
95th-Percentile Queue Length [veh]	2.47	0.41	0.49	2.07	1.50	1.04
95th-Percentile Queue Length [ft]	61.79	10.31	12.23	51.84	37.49	26.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.71	4.84	11.24	6.30	9.88	9.63
Movement LOS	A	A	B	A	A	A
d_A, Approach Delay [s/veh]	6.36		6.83		9.78	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	7.24					
Intersection LOS	A					
Intersection V/C	0.421					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1150	50	70	1100	60	120	350	130	80	290	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1150	50	70	1100	60	120	350	130	80	290	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	307	13	19	303	17	33	95	35	26	95	13
Total Analysis Volume [veh/h]	32	1229	53	77	1213	66	130	379	141	105	381	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	30	30	30	30	30
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.03	0.17	0.34	0.34	0.14	0.20	0.09	0.10	0.23
s, saturation flow rate [veh/h]	439	3618	1522	461	1900	1851	961	1900	1549	1009	1849
c, Capacity [veh/h]	186	1824	768	192	958	933	251	723	590	295	704
d1, Uniform Delay [s]	26.40	14.89	10.18	29.12	14.87	14.96	32.02	19.16	16.87	28.33	20.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.12
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.01	2.01	0.17	6.14	3.76	3.99	1.64	0.59	0.21	0.72	1.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.67	0.07	0.40	0.67	0.68	0.52	0.52	0.24	0.36	0.62
d, Delay for Lane Group [s/veh]	28.41	16.90	10.36	35.26	18.64	18.95	33.67	19.75	17.08	29.05	21.06
Lane Group LOS	C	B	B	D	B	B	C	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.61	8.26	0.49	1.64	8.69	8.64	2.46	5.28	1.73	1.83	6.51
50th-Percentile Queue Length [ft]	15.27	206.60	12.37	40.93	217.14	216.09	61.62	132.00	43.13	45.63	162.77
95th-Percentile Queue Length [veh]	1.10	12.98	0.89	2.95	13.52	13.47	4.44	9.05	3.11	3.29	10.70
95th-Percentile Queue Length [ft]	27.49	324.46	22.26	73.67	337.98	336.64	110.91	226.22	77.63	82.14	267.39

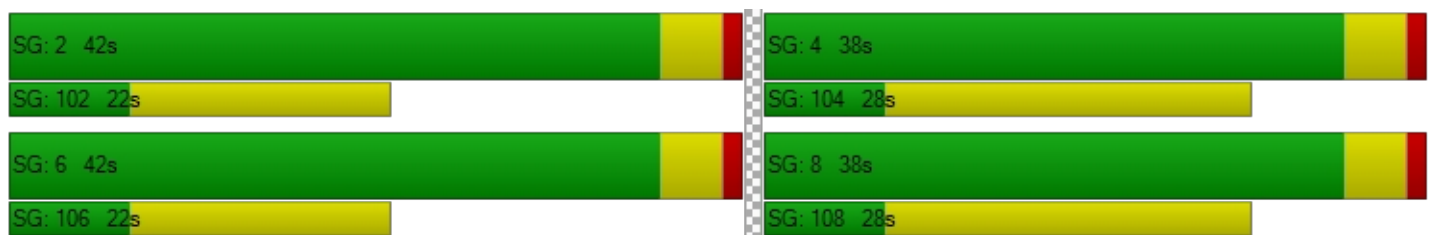


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.41	16.90	10.36	35.26	18.78	18.95	33.67	19.75	17.08	29.05	21.06	21.06
Movement LOS	C	B	B	D	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.91			19.73			21.95			22.62		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.55											
Intersection LOS	B											
Intersection V/C	0.578											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↻			↵↻			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	260	70	160	200	60	60	560	130	20	420	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	260	70	160	200	60	60	560	130	20	420	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	79	21	49	61	18	16	147	34	5	114	8
Total Analysis Volume [veh/h]	24	316	85	197	246	74	63	587	136	22	457	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	50	50	50	50	50	50	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	36	36	36	36	36	35	35	35	35	35
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.02	0.22	0.33	0.41	0.12	0.07	0.20	0.20	0.03	0.26
s, saturation flow rate [veh/h]	1152	1814	600	600	600	914	1900	1729	738	1866
c, Capacity [veh/h]	155	820	257	271	271	272	822	748	280	808
d1, Uniform Delay [s]	36.35	15.41	17.87	20.34	13.69	27.59	16.02	16.14	22.74	17.45
k, delay calibration	0.11	0.11	0.15	0.25	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.46	0.45	6.30	21.45	0.54	1.99	1.81	2.10	0.55	3.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

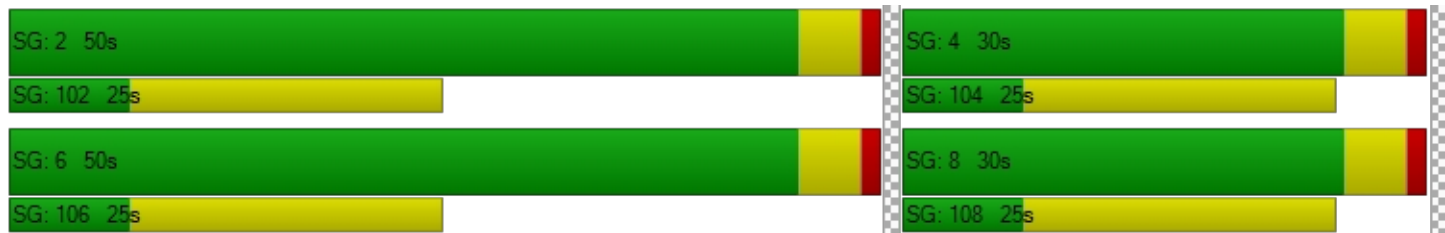
X, volume / capacity	0.15	0.49	0.77	0.91	0.27	0.23	0.45	0.47	0.08	0.61
d, Delay for Lane Group [s/veh]	36.80	15.86	24.16	41.79	14.22	29.58	17.82	18.23	23.28	20.83
Lane Group LOS	D	B	C	D	B	C	B	B	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	4.78	3.11	5.40	0.81	1.16	4.92	4.69	0.35	7.20
50th-Percentile Queue Length [ft]	11.44	119.41	77.80	135.05	20.17	28.97	122.93	117.34	8.78	180.12
95th-Percentile Queue Length [veh]	0.82	8.36	5.60	9.21	1.45	2.09	8.55	8.25	0.63	11.61
95th-Percentile Queue Length [ft]	20.59	209.01	140.04	230.35	36.30	52.14	213.84	206.16	15.80	290.17

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.80	15.86	15.86	24.16	41.79	14.22	29.58	17.97	18.23	23.28	20.83	20.83
Movement LOS	D	B	B	C	D	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.04			31.13			18.95			20.93		
Approach LOS	B			C			B			C		
d_I, Intersection Delay [s/veh]	21.85											
Intersection LOS	C											
Intersection V/C	0.673											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.561

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	110	680	260	220	930	10	30	440	100	90	350	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	680	260	220	930	10	30	440	100	90	350	10
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	186	71	57	240	3	8	116	26	27	105	3
Total Analysis Volume [veh/h]	120	745	285	227	959	10	32	465	106	108	422	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	74	61	61	74	64	64	36	25	25	36	28	28
g / C, Green / Cycle	0.62	0.51	0.51	0.62	0.53	0.53	0.30	0.20	0.20	0.30	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.16	0.28	0.29	0.30	0.26	0.26	0.03	0.15	0.16	0.10	0.11	0.12
s, saturation flow rate [veh/h]	736	1900	1675	745	1900	1891	1007	1900	1704	1111	1900	1868
c, Capacity [veh/h]	447	970	856	436	1007	1002	357	388	348	296	448	441
d1, Uniform Delay [s]	11.38	20.04	20.29	14.32	17.80	17.81	30.40	44.89	45.34	32.64	39.54	39.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	2.29	2.79	4.39	1.65	1.66	0.04	1.14	1.60	0.28	0.30	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.27	0.56	0.57	0.52	0.48	0.48	0.09	0.76	0.80	0.37	0.49	0.49
d, Delay for Lane Group [s/veh]	12.85	22.33	23.08	18.72	19.46	19.47	30.44	46.03	46.93	32.92	39.84	39.90
Lane Group LOS	B	C	C	B	B	B	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.43	10.71	9.96	3.06	8.79	8.76	0.67	8.32	7.99	2.36	5.59	5.55
50th-Percentile Queue Length [ft]	35.87	267.80	249.10	76.53	219.64	219.03	16.68	208.09	199.64	59.05	139.76	138.85
95th-Percentile Queue Length [veh]	2.58	16.08	15.14	5.51	13.65	13.62	1.20	13.05	12.62	4.25	9.47	9.42
95th-Percentile Queue Length [ft]	64.56	401.99	378.52	137.75	341.16	340.39	30.03	326.37	315.51	106.29	236.70	235.48

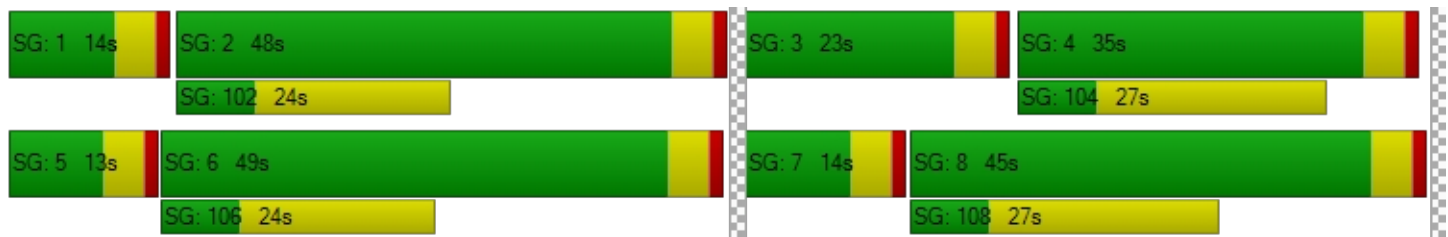


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.85	22.54	23.08	18.72	19.46	19.47	30.44	46.36	46.93	32.92	39.87	39.90
Movement LOS	B	C	C	B	B	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	21.66			19.32			45.62			38.49		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	27.61											
Intersection LOS	C											
Intersection V/C	0.561											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	20	340	170	270	430	70	80	470	120	40	570	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	340	170	270	430	70	80	470	120	40	570	50
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	94	47	74	117	19	20	119	30	13	178	16
Total Analysis Volume [veh/h]	22	377	188	294	468	76	81	477	122	50	713	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.02	0.20	0.12	0.29	0.25	0.05	0.12	0.16	0.17	0.06	0.21	0.21
s, saturation flow rate [veh/h]	938	1900	1568	1016	1900	1581	702	1900	1733	826	1900	1823
c, Capacity [veh/h]	412	953	786	476	953	793	209	698	636	263	698	669
d1, Uniform Delay [s]	16.08	10.85	9.88	19.69	11.54	9.14	28.47	16.74	16.83	24.19	17.68	17.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	1.23	0.72	5.89	1.81	0.24	0.43	0.16	0.19	0.13	0.27	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

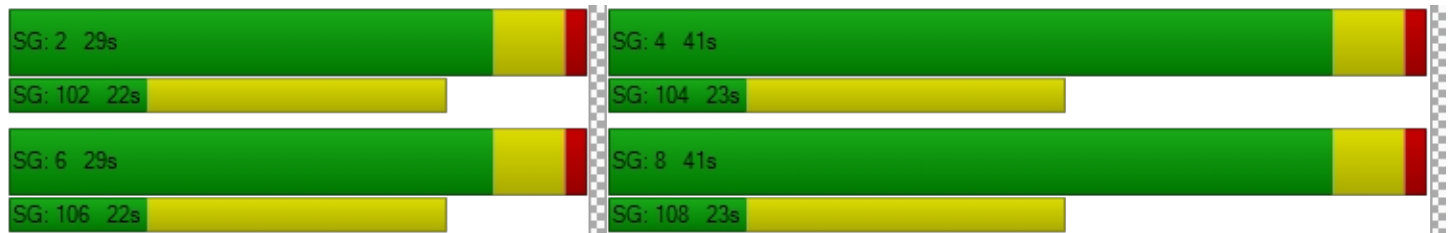
X, volume / capacity	0.05	0.40	0.24	0.62	0.49	0.10	0.39	0.44	0.46	0.19	0.56	0.57
d, Delay for Lane Group [s/veh]	16.33	12.08	10.60	25.58	13.35	9.38	28.91	16.91	17.02	24.32	17.95	18.03
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.25	3.42	1.56	4.58	4.56	0.58	1.27	3.52	3.31	0.69	4.73	4.62
50th-Percentile Queue Length [ft]	6.28	85.47	39.04	114.40	114.06	14.45	31.81	87.88	82.83	17.25	118.25	115.46
95th-Percentile Queue Length [veh]	0.45	6.15	2.81	8.08	8.07	1.04	2.29	6.33	5.96	1.24	8.30	8.14
95th-Percentile Queue Length [ft]	11.31	153.85	70.27	202.11	201.64	26.01	57.25	158.18	149.10	31.06	207.42	203.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.33	12.08	10.60	25.58	13.35	9.38	28.91	16.95	17.02	24.32	17.98	18.03
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	11.77			17.28			18.39			18.37		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.74											
Intersection LOS	B											
Intersection V/C	0.499											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	50	400	40	200	420	250	10	420	30	200	750	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	400	40	200	420	250	10	420	30	200	750	180
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	120	12	57	119	71	3	109	8	53	198	48
Total Analysis Volume [veh/h]	60	479	48	227	477	284	10	436	31	211	792	190
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.08	0.13	0.03	0.25	0.21	0.22	0.02	0.12	0.02	0.22	0.27	0.27
s, saturation flow rate [veh/h]	712	3618	1573	925	1900	1608	581	3618	1535	952	1900	1752
c, Capacity [veh/h]	335	1784	776	465	937	793	166	1358	576	347	713	658
d1, Uniform Delay [s]	17.35	10.36	9.27	17.16	11.43	11.54	28.30	15.53	13.94	24.84	18.63	18.74
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.10	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.37	0.15	3.63	1.46	1.83	0.06	0.05	0.01	0.64	1.24	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.27	0.06	0.49	0.43	0.45	0.06	0.32	0.05	0.61	0.71	0.72
d, Delay for Lane Group [s/veh]	18.51	10.73	9.42	20.79	12.88	13.37	28.36	15.58	13.95	25.48	19.87	20.28
Lane Group LOS	B	B	A	C	B	B	C	B	B	C	B	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.79	2.07	0.39	3.16	3.97	3.58	0.15	2.31	0.30	3.20	6.66	6.33
50th-Percentile Queue Length [ft]	19.80	51.86	9.71	78.89	99.15	89.43	3.74	57.71	7.39	80.01	166.44	158.16
95th-Percentile Queue Length [veh]	1.43	3.73	0.70	5.68	7.14	6.44	0.27	4.16	0.53	5.76	10.89	10.45
95th-Percentile Queue Length [ft]	35.63	93.35	17.49	142.00	178.47	160.98	6.74	103.88	13.31	144.02	272.23	261.28

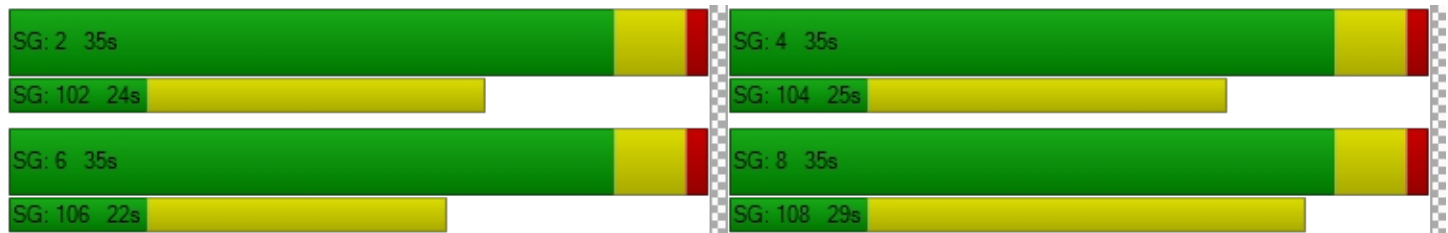


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.51	10.73	9.42	20.79	12.95	13.37	28.36	15.58	13.95	25.48	20.01	20.28
Movement LOS	B	B	A	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	11.42			14.87			15.74			21.02		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.64											
Intersection LOS	B											
Intersection V/C	0.517											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.706

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	580	60	420	900	50	120	290	360	180	910	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	580	60	420	900	50	120	290	360	180	910	50
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	161	17	110	237	13	32	77	96	56	282	15
Total Analysis Volume [veh/h]	100	645	67	442	946	53	127	308	382	223	1127	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	58	41	41	59	47	47	52	36	36	52	40	40
g / C, Green / Cycle	0.49	0.35	0.35	0.49	0.39	0.39	0.43	0.30	0.30	0.43	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.13	0.19	0.19	0.25	0.26	0.27	0.17	0.16	0.25	0.21	0.32	0.32
s, saturation flow rate [veh/h]	781	1900	1824	1755	1900	1856	727	1900	1525	1054	1900	1860
c, Capacity [veh/h]	340	656	629	860	744	727	258	564	452	365	638	625
d1, Uniform Delay [s]	20.47	31.80	31.87	20.85	30.20	30.30	27.74	35.44	39.62	26.69	38.67	38.78
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.20	0.05	0.29	0.29
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.19	3.33	3.53	2.19	4.88	5.13	6.60	0.31	7.84	0.83	15.76	17.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

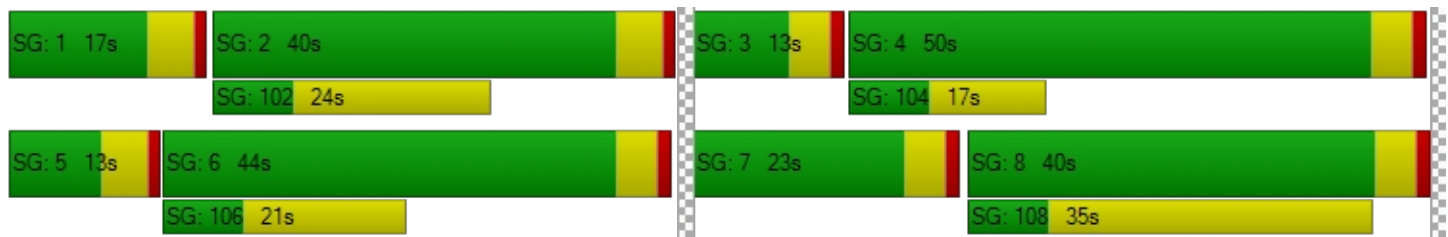
X, volume / capacity	0.29	0.55	0.56	0.51	0.68	0.68	0.49	0.55	0.84	0.61	0.94	0.94
d, Delay for Lane Group [s/veh]	22.66	35.13	35.39	23.04	35.08	35.43	34.35	35.75	47.46	27.52	54.43	55.84
Lane Group LOS	C	D	D	C	D	D	C	D	D	C	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.85	9.67	9.41	9.65	13.82	13.71	2.66	7.61	11.46	4.16	19.64	19.61
50th-Percentile Queue Length [ft]	46.34	241.73	235.23	241.22	345.48	342.64	66.52	190.14	286.59	103.99	490.95	490.22
95th-Percentile Queue Length [veh]	3.34	14.77	14.44	14.74	19.92	19.78	4.79	12.13	17.02	7.49	26.91	26.87
95th-Percentile Queue Length [ft]	83.41	369.22	360.99	368.58	497.90	494.42	119.73	303.21	425.41	187.17	672.64	671.77

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.66	35.24	35.39	23.04	35.25	35.43	34.35	35.75	47.46	27.52	55.09	55.84
Movement LOS	C	D	D	C	D	D	C	D	D	C	E	E
d_A, Approach Delay [s/veh]	33.71			31.51			41.01			50.77		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.71											
Intersection LOS	D											
Intersection V/C	0.706											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	340	270	0	470	720	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	340	270	0	470	720	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	91	72	0	128	198	0
Total Analysis Volume [veh/h]	364	289	0	512	792	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62
g / C, Green / Cycle	0.21	0.21	0.68	0.68
(v / s)_j Volume / Saturation Flow Rate	0.19	0.19	0.14	0.22
s, saturation flow rate [veh/h]	1810	1627	3618	3618
c, Capacity [veh/h]	385	346	2478	2478
d1, Uniform Delay [s]	34.32	34.41	5.19	5.71
k, delay calibration	0.14	0.14	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.74	10.75	0.19	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.89	0.90	0.21	0.32
d, Delay for Lane Group [s/veh]	43.06	45.16	5.38	6.05
Lane Group LOS	D	D	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	7.52	7.04	1.55	2.65
50th-Percentile Queue Length [ft]	188.08	176.07	38.87	66.26
95th-Percentile Queue Length [veh]	12.02	11.40	2.80	4.77
95th-Percentile Queue Length [ft]	300.53	284.88	69.97	119.26

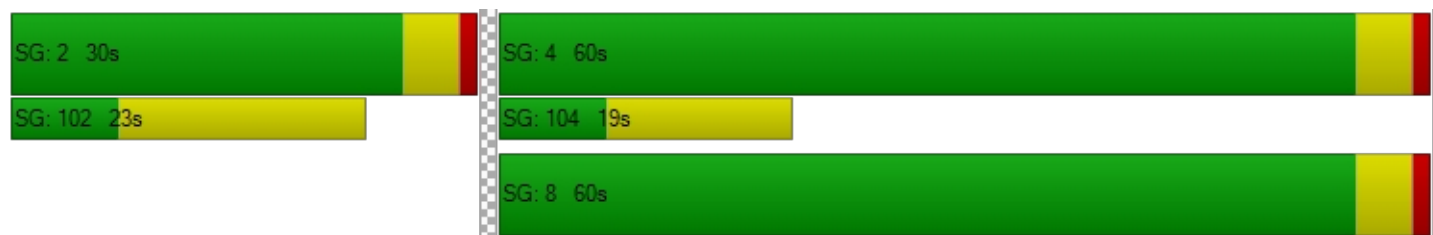


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.26	45.16	0.00	5.38	6.05	0.00
Movement LOS	D	D		A	A	
d_A, Approach Delay [s/veh]	44.06		5.38		6.05	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	18.56					
Intersection LOS	B					
Intersection V/C	0.410					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	100	90	10	30	30	20	410	20	18	1110	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	100	90	10	30	30	20	410	20	18	1110	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	34	30	3	10	10	6	115	6	5	303	19
Total Analysis Volume [veh/h]	54	135	121	14	41	41	22	458	22	18	1212	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62	62	62	62
g / C, Green / Cycle	0.21	0.21	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.05	0.13	0.13	0.34	0.35
s, saturation flow rate [veh/h]	1693	1591	435	1900	1869	1900	1854
c, Capacity [veh/h]	398	375	297	1312	1290	1312	1280
d1, Uniform Delay [s]	34.37	29.87	11.93	4.93	4.93	6.51	6.59
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	0.13	0.48	0.31	0.32	1.32	1.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

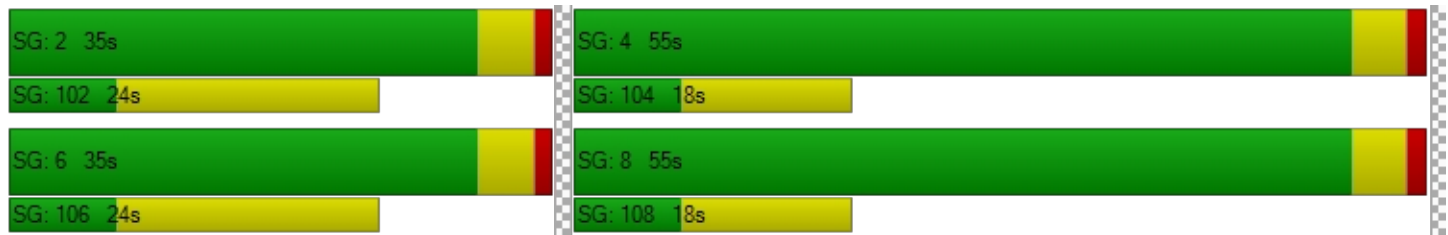
X, volume / capacity	0.78	0.26	0.07	0.18	0.18	0.49	0.50
d, Delay for Lane Group [s/veh]	35.64	30.00	12.41	5.24	5.25	7.82	8.01
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.46	1.71	0.26	1.45	1.44	5.20	5.29
50th-Percentile Queue Length [ft]	161.38	42.72	6.59	36.36	35.98	130.10	132.23
95th-Percentile Queue Length [veh]	10.62	3.08	0.47	2.62	2.59	8.95	9.06
95th-Percentile Queue Length [ft]	265.55	76.89	11.87	65.45	64.77	223.64	226.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.64	35.64	35.64	30.00	30.00	30.00	12.41	5.24	5.25	0.00	7.91	8.01
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.64			30.00			5.56			7.92		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	12.26											
Intersection LOS	B											
Intersection V/C	0.531											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	48.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	960	80	80	680	240	10	180	50	410	530	200
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	960	80	80	680	240	10	180	50	410	530	200
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	255	21	20	172	61	3	50	14	114	147	55
Total Analysis Volume [veh/h]	32	1020	85	81	687	242	11	201	56	454	587	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	35	26	26	35	26	26	25	25	25	46	46	55
g / C, Green / Cycle	0.38	0.29	0.29	0.38	0.28	0.28	0.28	0.28	0.28	0.51	0.51	0.61
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.31	0.11	0.26	0.28	0.01	0.07	0.08	0.32	0.31	0.14
s, saturation flow rate [veh/h]	852	1900	1780	768	1900	1582	835	1900	1680	1421	1900	1553
c, Capacity [veh/h]	275	544	510	267	540	449	113	526	465	787	978	953
d1, Uniform Delay [s]	21.20	32.13	32.13	22.08	31.02	32.08	42.05	25.29	25.46	14.38	15.33	7.83
k, delay calibration	0.50	0.50	0.50	0.08	0.50	0.50	0.04	0.04	0.04	0.08	0.06	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	45.99	59.57	0.45	20.65	39.25	0.14	0.09	0.12	0.49	0.35	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	1.03	1.07	0.30	0.90	0.99	0.10	0.25	0.27	0.58	0.60	0.23
d, Delay for Lane Group [s/veh]	22.06	78.12	91.70	22.53	51.67	71.33	42.18	25.38	25.58	14.88	15.68	7.87
Lane Group LOS	C	F	F	C	D	E	D	C	C	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.47	18.18	18.96	1.08	12.75	14.00	0.24	2.12	2.06	5.72	7.96	1.76
50th-Percentile Queue Length [ft]	11.67	454.58	473.96	26.94	318.63	350.03	5.94	52.99	51.49	142.94	198.91	44.01
95th-Percentile Queue Length [veh]	0.84	25.62	27.19	1.94	18.60	20.14	0.43	3.82	3.71	9.64	12.58	3.17
95th-Percentile Queue Length [ft]	21.01	640.60	679.84	48.49	465.00	503.44	10.68	95.39	92.68	240.98	314.56	79.22

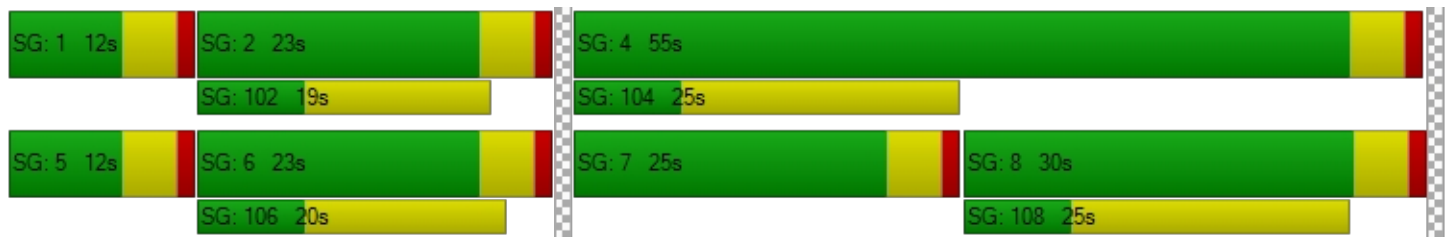


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.06	84.25	91.70	22.53	57.42	71.33	42.18	25.45	25.58	14.88	15.68	7.87
Movement LOS	C	F	F	C	E	E	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	83.06			57.96			26.17			14.02		
Approach LOS	F			E			C			B		
d_I, Intersection Delay [s/veh]	48.32											
Intersection LOS	D											
Intersection V/C	0.646											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1280	50	30	1160	50	60	120	30	60	60	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1280	50	30	1160	50	60	120	30	60	60	50
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	331	13	8	302	13	18	37	9	19	19	16
Total Analysis Volume [veh/h]	62	1325	52	31	1208	52	73	147	37	75	75	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_j Volume / Saturation Flow Rate	0.14	0.36	0.37	0.08	0.33	0.34	0.17	0.16
s, saturation flow rate [veh/h]	447	1900	1864	400	1900	1862	1492	1303
c, Capacity [veh/h]	296	1248	1224	264	1248	1223	398	358
d1, Uniform Delay [s]	13.51	7.41	7.44	13.82	7.07	7.09	28.46	27.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	1.78	1.85	0.90	1.48	1.53	0.66	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

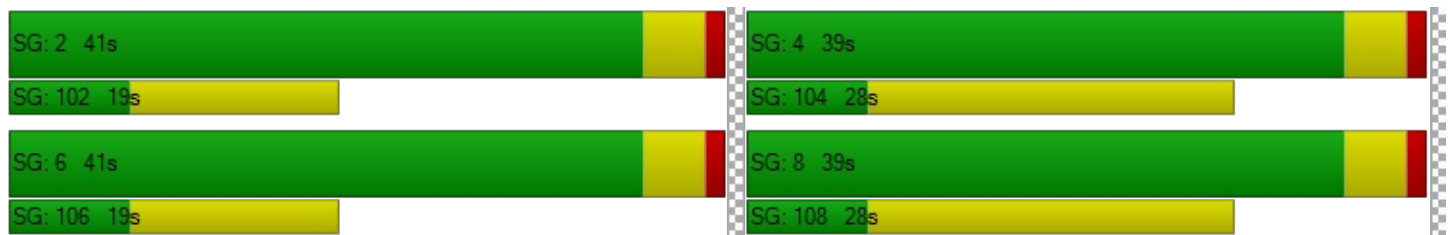
X, volume / capacity	0.21	0.55	0.56	0.12	0.51	0.51	0.65	0.59
d, Delay for Lane Group [s/veh]	15.11	9.18	9.29	14.73	8.55	8.62	29.12	28.43
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.77	5.54	5.53	0.38	4.82	4.79	4.42	3.58
50th-Percentile Queue Length [ft]	19.29	138.54	138.21	9.60	120.47	119.65	110.56	89.49
95th-Percentile Queue Length [veh]	1.39	9.40	9.38	0.69	8.42	8.37	7.87	6.44
95th-Percentile Queue Length [ft]	34.71	235.05	234.61	17.27	210.47	209.34	196.78	161.08

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.11	9.24	9.29	14.73	8.58	8.62	29.12	29.12	29.12	28.43	28.43	28.43
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.49			8.73			29.12			28.43		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.02											
Intersection LOS	B											
Intersection V/C	0.540											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	30	1270	50	20	1260	180	80	68	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	30	1270	50	20	1260	180	80	68	30
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	8	327	13	5	331	47	23	22	9
Total Analysis Volume [veh/h]	0	0	0	31	1308	51	21	1326	189	93	89	35
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	C	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		97	97	97	97	97	97	14	14
g / C, Green / Cycle		0.81	0.81	0.81	0.81	0.81	0.81	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate		0.09	0.36	0.36	0.05	0.40	0.41	0.10	0.02
s, saturation flow rate [veh/h]		350	1900	1870	407	1900	1807	1853	1487
c, Capacity [veh/h]		289	1538	1514	337	1538	1462	211	169
d1, Uniform Delay [s]		7.91	3.40	3.41	6.49	3.66	3.71	52.15	48.16
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.75	0.93	0.96	0.36	1.16	1.28	4.03	0.22
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.11	0.44	0.45	0.06	0.50	0.51	0.86	0.21
d, Delay for Lane Group [s/veh]		8.65	4.33	4.37	6.85	4.82	4.99	56.18	48.38
Lane Group LOS		A	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.35	4.10	4.08	0.21	5.27	5.22	5.56	0.96
50th-Percentile Queue Length [ft]		8.87	102.58	101.94	5.27	131.80	130.58	139.07	23.91
95th-Percentile Queue Length [veh]		0.64	7.39	7.34	0.38	9.04	8.97	9.43	1.72
95th-Percentile Queue Length [ft]		15.97	184.65	183.49	9.49	225.94	224.29	235.77	43.04



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	8.65	4.35	4.37	6.85	4.89	4.99	56.18	56.18	48.38
Movement LOS				A	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			4.45			4.93			54.93		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	8.17											
Intersection LOS	A											
Intersection V/C	0.511											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌			⇌⇌			⇌⇌			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1120	160	150	1020	20	140	10	130	20	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1120	160	150	1020	20	140	10	130	20	10	10
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	285	41	39	265	5	40	3	37	7	4	4
Total Analysis Volume [veh/h]	10	1142	163	156	1059	21	159	11	147	30	15	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	87	87	87	14	14	6
g / C, Green / Cycle	0.63	0.63	0.72	0.72	0.72	0.11	0.11	0.05
(v / s)_j Volume / Saturation Flow Rate	0.37	0.38	0.27	0.29	0.29	0.09	0.09	0.03
s, saturation flow rate [veh/h]	1874	1623	582	1900	1886	1815	1548	1777
c, Capacity [veh/h]	1202	1014	408	1371	1361	204	174	90
d1, Uniform Delay [s]	13.33	13.61	10.44	6.50	6.50	52.11	52.18	55.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.05	2.72	2.71	0.85	0.86	3.35	4.22	3.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

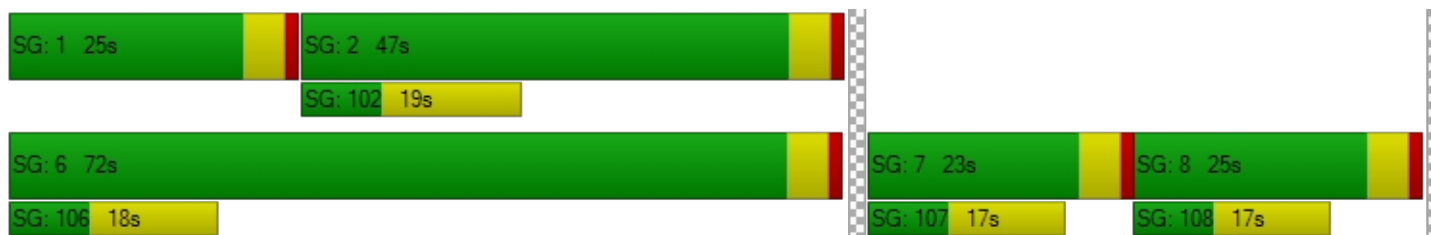
X, volume / capacity	0.58	0.61	0.38	0.40	0.40	0.83	0.84	0.67
d, Delay for Lane Group [s/veh]	15.38	16.33	13.14	7.35	7.36	55.46	56.40	59.06
Lane Group LOS	B	B	B	A	A	E	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	11.02	10.11	1.36	4.99	4.97	5.24	4.58	1.85
50th-Percentile Queue Length [ft]	275.55	252.65	33.96	124.83	124.17	130.96	114.39	46.25
95th-Percentile Queue Length [veh]	16.47	15.32	2.45	8.66	8.62	8.99	8.08	3.33
95th-Percentile Queue Length [ft]	411.66	382.99	61.13	216.45	215.54	224.80	202.10	83.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.38	15.75	16.33	13.14	7.36	7.36	55.46	55.46	56.40	59.06	59.06	59.06
Movement LOS	B	B	B	B	A	A	E	E	E	E	E	E
d_A, Approach Delay [s/veh]	15.82			8.09			55.89			59.06		
Approach LOS	B			A			E			E		
d_I, Intersection Delay [s/veh]	17.78											
Intersection LOS	B											
Intersection V/C	0.540											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└┌			└┌			└┌└		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	560	80	190	630	10	120	310	70	30	280	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	560	80	190	630	10	120	310	70	30	280	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	156	22	51	170	3	34	87	20	9	81	3
Total Analysis Volume [veh/h]	0	622	89	204	678	11	135	349	79	35	323	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	53	53	28	28	28	28	28
g / C, Green / Cycle	0.46	0.59	0.59	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.39	0.22	0.36	0.13	0.23	0.04	0.17	0.01
s, saturation flow rate [veh/h]	1847	942	1893	1071	1833	975	1900	1551
c, Capacity [veh/h]	846	416	1111	240	570	159	591	483
d1, Uniform Delay [s]	21.48	15.90	12.09	37.26	27.86	39.44	25.72	21.52
k, delay calibration	0.50	0.50	0.50	0.04	0.17	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.85	4.09	2.61	0.77	3.07	0.26	0.29	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.84	0.49	0.62	0.56	0.75	0.22	0.55	0.02
d, Delay for Lane Group [s/veh]	31.34	19.98	14.70	38.04	30.93	39.70	26.02	21.53
Lane Group LOS	C	B	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	14.36	2.08	8.37	2.89	8.50	0.75	5.72	0.18
50th-Percentile Queue Length [ft]	359.08	51.94	209.20	72.34	212.50	18.74	143.03	4.43
95th-Percentile Queue Length [veh]	20.58	3.74	13.11	5.21	13.28	1.35	9.64	0.32
95th-Percentile Queue Length [ft]	514.47	93.49	327.80	130.20	332.03	33.74	241.09	7.98

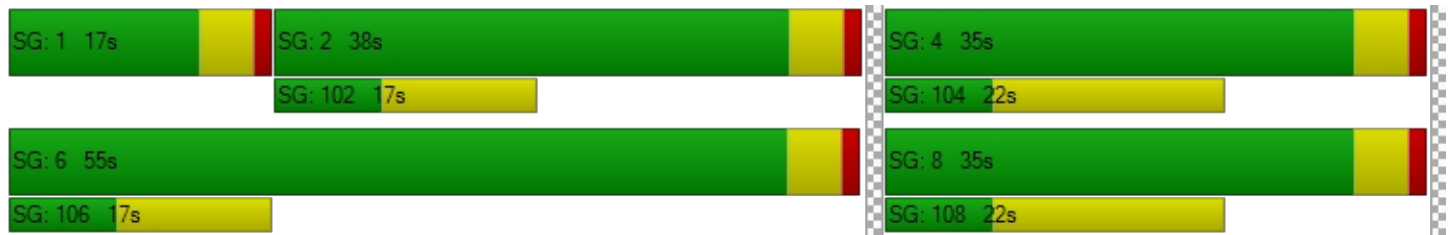


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	31.34	31.34	19.98	14.70	14.70	38.04	30.93	30.93	39.70	26.02	21.53
Movement LOS		C	C	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		31.34		15.91			32.63			27.17		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]	25.58											
Intersection LOS	C											
Intersection V/C	0.677											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.361

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	620	550	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	620	550	10	10	10
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	163	150	3	4	4
Total Analysis Volume [veh/h]	21	651	599	11	16	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	1
g / C, Green / Cycle	0.47	0.47	0.47	0.06
(v / s)_j Volume / Saturation Flow Rate	0.03	0.34	0.32	0.02
s, saturation flow rate [veh/h]	822	1900	1894	1707
c, Capacity [veh/h]	489	896	893	114
d1, Uniform Delay [s]	7.29	4.23	4.10	8.85
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.35	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

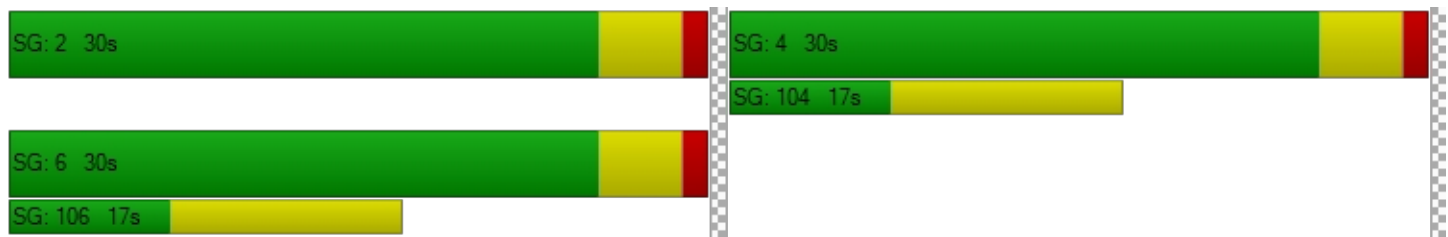
X, volume / capacity	0.04	0.73	0.68	0.28
d, Delay for Lane Group [s/veh]	7.31	4.66	4.45	9.34
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.34	0.30	0.08
50th-Percentile Queue Length [ft]	1.12	8.60	7.56	2.05
95th-Percentile Queue Length [veh]	0.08	0.62	0.54	0.15
95th-Percentile Queue Length [ft]	2.01	15.49	13.61	3.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.31	4.66	4.45	4.45	9.34	9.34
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.74		4.45		9.34	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.72					
Intersection LOS	A					
Intersection V/C	0.361					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	950	430	50	1130	410	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	950	430	50	1130	410	150
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	253	115	14	311	120	44
Total Analysis Volume [veh/h]	1014	459	55	1244	482	176
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	82	82	5	92	19	19
g / C, Green / Cycle	0.69	0.69	0.04	0.77	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.39	0.43	0.03	0.34	0.14	0.11
s, saturation flow rate [veh/h]	1900	1701	1810	3618	3514	1533
c, Capacity [veh/h]	1307	1170	72	2770	554	241
d1, Uniform Delay [s]	9.54	10.30	57.02	5.01	49.31	48.06
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.76	2.58	6.30	0.53	1.71	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.56	0.63	0.77	0.45	0.87	0.73
d, Delay for Lane Group [s/veh]	11.30	12.88	63.32	5.54	51.01	49.65
Lane Group LOS	B	B	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	9.96	10.90	1.78	4.87	7.16	5.11
50th-Percentile Queue Length [ft]	248.94	272.51	44.42	121.83	179.09	127.81
95th-Percentile Queue Length [veh]	15.13	16.31	3.20	8.49	11.55	8.82
95th-Percentile Queue Length [ft]	378.32	407.87	79.96	212.35	288.83	220.52



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.74	12.88	63.32	5.54	51.01	49.65
Movement LOS	B	B	E	A	D	D
d_A, Approach Delay [s/veh]	12.09		7.99		50.65	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	17.93					
Intersection LOS	B					
Intersection V/C	0.601					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	70	340	270	70	250	70	330	620	100	90	260	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	340	270	70	250	70	330	620	100	90	260	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	96	76	21	75	21	96	180	29	27	79	3
Total Analysis Volume [veh/h]	79	384	305	84	300	84	384	721	116	109	315	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.25	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.07	0.20	0.20	0.08	0.16	0.05	0.29	0.23	0.23	0.17	0.09	0.09
s, saturation flow rate [veh/h]	1088	1900	1538	1002	1900	1566	1320	1900	1755	660	1900	1854
c, Capacity [veh/h]	438	840	680	374	840	692	638	812	750	134	482	471
d1, Uniform Delay [s]	18.09	13.71	13.65	20.36	12.99	11.56	15.24	14.88	15.03	34.64	21.41	21.44
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.16	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.90	1.79	2.14	1.39	1.19	0.36	1.32	0.20	0.24	4.42	0.15	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

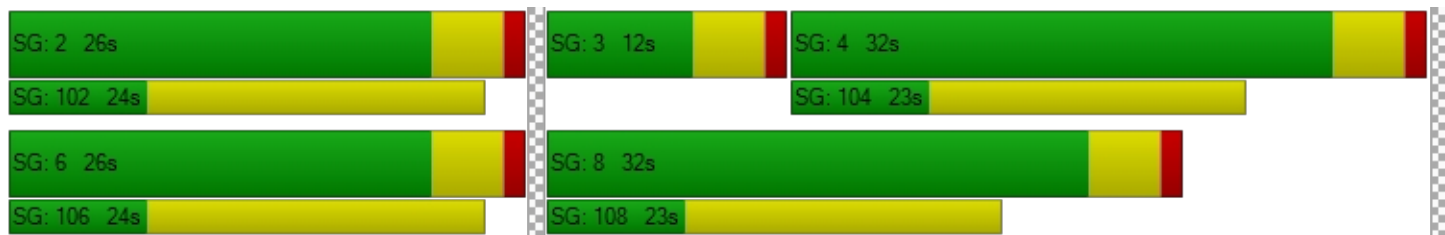
X, volume / capacity	0.18	0.46	0.45	0.22	0.36	0.12	0.60	0.53	0.55	0.81	0.34	0.35
d, Delay for Lane Group [s/veh]	18.99	15.51	15.79	21.75	14.18	11.92	16.56	15.08	15.27	39.06	21.56	21.60
Lane Group LOS	B	B	B	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.99	4.15	3.36	1.16	3.04	0.76	4.27	4.62	4.47	1.97	2.11	2.10
50th-Percentile Queue Length [ft]	24.79	103.81	83.88	29.02	76.02	18.94	106.80	115.54	111.66	49.34	52.83	52.46
95th-Percentile Queue Length [veh]	1.79	7.47	6.04	2.09	5.47	1.36	7.66	8.15	7.93	3.55	3.80	3.78
95th-Percentile Queue Length [ft]	44.63	186.86	150.99	52.24	136.84	34.10	191.54	203.68	198.31	88.82	95.10	94.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.99	15.51	15.79	21.75	14.18	11.92	16.56	15.16	15.27	39.06	21.58	21.60
Movement LOS	B	B	B	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	15.98			15.13			15.61			25.95		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.19											
Intersection LOS	B											
Intersection V/C	0.442											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	39.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	380	300	90	600	60	370	800	70	10	880	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	380	300	90	600	60	370	800	70	10	880	10
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	111	87	26	173	17	103	222	19	3	247	3
Total Analysis Volume [veh/h]	58	443	350	104	690	69	411	888	78	11	988	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	24	54	8	27	27	12	67	80	2	56	56
g / C, Green / Cycle	0.05	0.20	0.45	0.07	0.22	0.22	0.10	0.56	0.66	0.02	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.03	0.12	0.22	0.04	0.20	0.20	0.12	0.25	0.05	0.01	0.26	0.26
s, saturation flow rate [veh/h]	1810	3618	1561	2796	1900	1826	3514	3618	1574	1810	1900	1891
c, Capacity [veh/h]	90	736	707	203	423	406	364	2012	1044	33	894	890
d1, Uniform Delay [s]	55.94	43.37	23.17	56.11	45.51	45.60	53.78	15.66	7.15	58.21	22.82	22.82
k, delay calibration	0.04	0.04	0.13	0.04	0.05	0.06	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	0.30	0.63	0.75	4.21	5.03	61.54	0.70	0.01	2.24	2.53	2.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.60	0.50	0.51	0.91	0.92	1.13	0.44	0.07	0.34	0.56	0.56
d, Delay for Lane Group [s/veh]	58.75	43.66	23.80	56.86	49.72	50.63	115.32	16.36	7.16	60.45	25.34	25.37
Lane Group LOS	E	D	C	E	D	D	F	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.80	6.01	7.06	1.57	11.63	11.38	8.59	7.20	0.69	0.35	10.65	10.62
50th-Percentile Queue Length [ft]	44.88	150.14	176.39	39.33	290.85	284.54	214.75	180.05	17.16	8.77	266.29	265.44
95th-Percentile Queue Length [veh]	3.23	10.02	11.41	2.83	17.23	16.91	14.02	11.60	1.24	0.63	16.00	15.96
95th-Percentile Queue Length [ft]	80.79	250.61	285.30	70.79	430.69	422.87	350.57	290.08	30.88	15.78	400.11	399.03



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.75	43.66	23.80	56.86	50.12	50.63	115.32	16.36	7.16	60.45	25.35	25.37
Movement LOS	E	D	C	E	D	D	F	B	A	E	C	C
d_A, Approach Delay [s/veh]	36.52			50.97			45.38			25.74		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	39.88											
Intersection LOS	D											
Intersection V/C	0.675											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	53.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.835

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	800	100	230	1250	80	100	1000	20	110	950	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	800	100	230	1250	80	100	1000	20	110	950	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	224	28	59	319	20	30	296	6	30	258	16
Total Analysis Volume [veh/h]	67	896	112	235	1278	82	118	1183	24	120	1032	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	41	41	10	46	46	6	44	44	6	44	44
g / C, Green / Cycle	0.05	0.34	0.34	0.08	0.38	0.38	0.05	0.37	0.37	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.25	0.07	0.07	0.35	0.05	0.03	0.22	0.22	0.03	0.40	0.41
s, saturation flow rate [veh/h]	1810	3618	1544	3514	3618	1542	3514	3618	1872	3514	1800	900
c, Capacity [veh/h]	87	1246	532	294	1375	586	175	1333	690	176	664	332
d1, Uniform Delay [s]	56.47	34.27	27.80	53.98	35.64	24.34	56.05	30.64	30.68	56.04	37.85	37.85
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	1.13	0.28	1.93	4.63	0.15	1.70	1.97	3.81	1.74	63.35	84.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

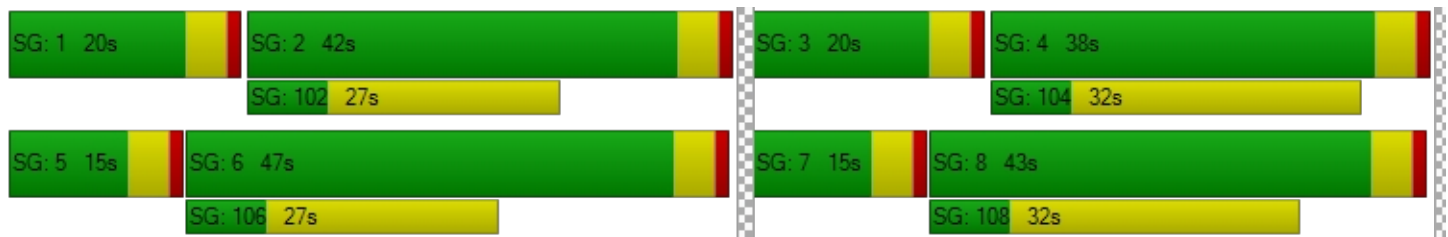
X, volume / capacity	0.77	0.72	0.21	0.80	0.93	0.14	0.68	0.60	0.60	0.68	1.09	1.12
d, Delay for Lane Group [s/veh]	61.89	35.40	28.08	55.90	40.27	24.49	57.75	32.60	34.49	57.78	101.20	122.13
Lane Group LOS	E	D	C	E	D	C	E	C	C	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	12.28	2.49	3.48	17.75	1.50	1.80	9.61	10.36	1.83	15.40	17.33
50th-Percentile Queue Length [ft]	55.78	306.98	62.29	86.88	443.85	37.59	44.97	240.21	258.89	45.76	384.99	433.26
95th-Percentile Queue Length [veh]	4.02	18.03	4.48	6.26	24.66	2.71	3.24	14.69	15.63	3.29	23.12	25.90
95th-Percentile Queue Length [ft]	100.41	450.65	112.12	156.39	616.61	67.67	80.95	367.30	390.83	82.36	577.95	647.39

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	35.40	28.08	55.90	40.27	24.49	57.75	33.22	34.49	57.78	107.39	122.13
Movement LOS	E	D	C	E	D	C	E	C	C	E	F	F
d_A, Approach Delay [s/veh]	36.29			41.76			35.43			103.29		
Approach LOS	D			D			D			F		
d_I, Intersection Delay [s/veh]	53.39											
Intersection LOS	D											
Intersection V/C	0.835											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	43.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.896

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	0	230	80	10	60	40	1400	10	20	1640	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	0	230	80	10	60	40	1400	10	20	1640	10
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	83	26	3	20	10	358	3	5	431	3
Total Analysis Volume [veh/h]	72	0	331	105	13	79	41	1431	10	21	1725	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	5	76	76	4	74	74
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.04	0.63	0.63	0.03	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.05	0.00	0.21	0.07	0.06	0.02	0.26	0.26	0.01	0.63	0.66
s, saturation flow rate [veh/h]	1319	1900	1575	1424	1620	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	272	427	354	354	364	79	2279	1193	54	1109	554
d1, Uniform Delay [s]	44.64	0.00	45.56	40.72	38.16	56.00	11.09	11.09	57.01	22.99	22.99
k, delay calibration	0.04	0.04	0.19	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.00	17.39	0.46	0.36	1.92	0.56	1.07	1.68	34.26	60.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.00	0.94	0.30	0.25	0.52	0.41	0.42	0.39	1.03	1.08
d, Delay for Lane Group [s/veh]	44.83	0.00	62.95	41.18	38.52	57.92	11.65	12.16	58.69	57.25	83.24
Lane Group LOS	D	A	E	D	D	E	B	B	E	F	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.91	0.00	11.22	2.69	2.25	1.26	6.22	6.68	0.65	19.58	23.59
50th-Percentile Queue Length [ft]	47.63	0.00	280.43	67.16	56.23	31.43	155.54	167.02	16.26	489.62	589.68
95th-Percentile Queue Length [veh]	3.43	0.00	16.71	4.84	4.05	2.26	10.31	10.92	1.17	27.45	33.47
95th-Percentile Queue Length [ft]	85.73	0.00	417.74	120.89	101.22	56.58	257.80	272.99	29.27	686.13	836.63



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.83	0.00	62.95	41.18	38.52	38.52	57.92	11.83	12.16	58.69	66.07	83.24
Movement LOS	D	A	E	D	D	D	E	B	B	E	F	F
d_A, Approach Delay [s/veh]	59.72			39.94			13.10			66.09		
Approach LOS	E			D			B			E		
d_I, Intersection Delay [s/veh]	43.62											
Intersection LOS	D											
Intersection V/C	0.896											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	45.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.928

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	460	1180	340	0	0	1920
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	460	1180	340	0	0	1920
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	304	91	0	0	515
Total Analysis Volume [veh/h]	474	1217	362	0	0	2061
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	24	94	16	87
g / C, Green / Cycle	0.20	0.79	0.14	0.72
(v / s)_i Volume / Saturation Flow Rate	0.13	0.43	0.10	0.79
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	700	2221	492	1883
d1, Uniform Delay [s]	44.47	4.78	49.74	16.55
k, delay calibration	0.04	0.30	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	0.59	0.81	51.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

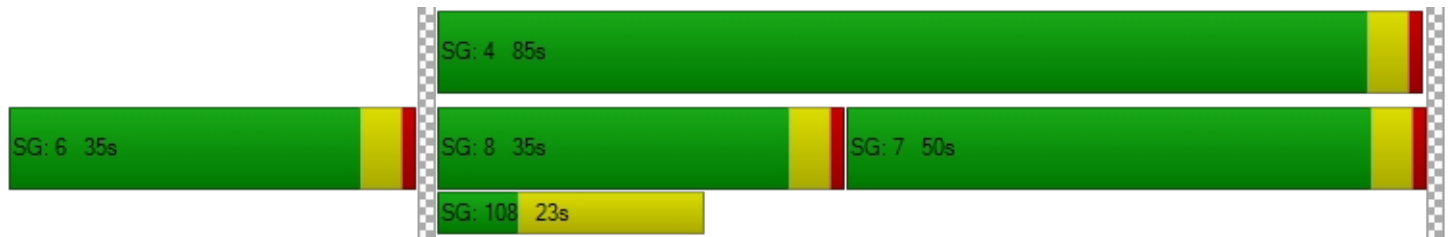
X, volume / capacity	0.68	0.55	0.74	1.09
d, Delay for Lane Group [s/veh]	44.90	5.37	50.55	68.27
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	6.26	3.47	5.27	17.51
50th-Percentile Queue Length [ft]	156.39	86.71	131.65	437.70
95th-Percentile Queue Length [veh]	10.36	6.24	9.03	26.21
95th-Percentile Queue Length [ft]	258.93	156.09	225.74	655.13

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.90	5.37	50.55	0.00	0.00	68.27
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	16.45		50.55		68.27	
Approach LOS	B		D		E	
d_I, Intersection Delay [s/veh]	45.41					
Intersection LOS	D					
Intersection V/C	0.928					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	68.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.128

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	340	180	1110	1280	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	340	180	1110	1280	75
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	12	0	0	0	0	104	55	296	341	20
Total Analysis Volume [veh/h]	0	0	46	0	0	0	0	416	220	1184	1365	80
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group			C	R	L	C	C
C, Cycle Length [s]			120	120	120	120	120
L, Total Lost Time per Cycle [s]			4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]			0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]			2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]			20	20	90	115	115
g / C, Green / Cycle			0.17	0.17	0.75	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate			0.11	0.14	0.99	0.38	0.39
s, saturation flow rate [veh/h]			3618	1552	1200	1900	1861
c, Capacity [veh/h]			611	262	905	1827	1789
d1, Uniform Delay [s]			46.80	48.26	14.72	0.14	0.14
k, delay calibration			0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor			1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]			0.50	2.78	146.50	0.64	0.68
d3, Initial Queue Delay [s]			0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio			1.00	1.00	1.00	1.00	1.00
PF, progression factor			1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity			0.68	0.84	1.31	0.40	0.40
d, Delay for Lane Group [s/veh]			47.30	51.04	161.22	0.79	0.82
Lane Group LOS			D	D	F	A	A
Critical Lane Group			No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]			5.87	6.56	28.19	0.33	0.34
50th-Percentile Queue Length [ft]			146.81	164.02	704.86	8.16	8.45
95th-Percentile Queue Length [veh]			9.85	10.76	44.88	0.59	0.61
95th-Percentile Queue Length [ft]			246.17	269.04	1122.03	14.68	15.20



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.30	51.04	161.22	0.80	0.82
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			48.60			73.05		
Approach LOS	A			A			D			E		
d_I, Intersection Delay [s/veh]	68.28											
Intersection LOS	E											
Intersection V/C	1.128											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	└			+								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	30	40	20	30	30	10	500	23	50	1190	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	30	40	20	30	30	10	500	23	50	1190	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	10	13	7	11	11	3	145	6	13	316	0
Total Analysis Volume [veh/h]	19	39	52	29	44	44	12	579	24	53	1265	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	94	94	94	94
g / C, Green / Cycle	0.14	0.14	0.78	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.17	0.17	0.38	0.37
s, saturation flow rate [veh/h]	1627	1339	1777	1729	1771	1729
c, Capacity [veh/h]	232	228	1418	1350	1415	1350
d1, Uniform Delay [s]	46.69	48.12	3.42	3.46	4.45	4.61
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.66	0.34	0.36	1.14	1.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

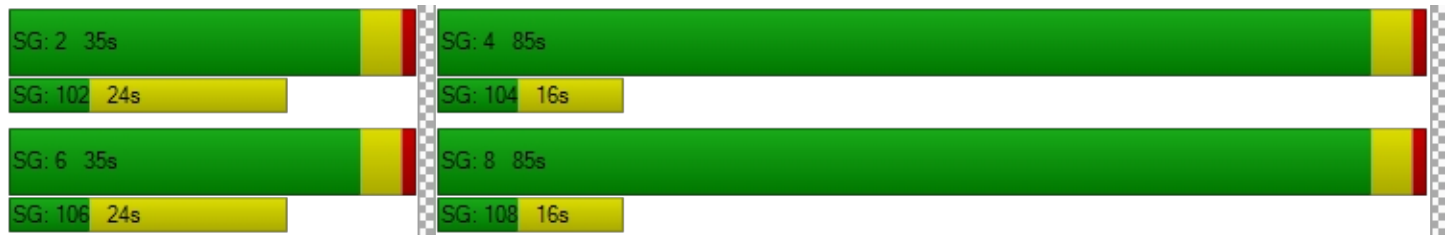
X, volume / capacity	0.39	0.51	0.21	0.21	0.47	0.48
d, Delay for Lane Group [s/veh]	47.09	48.78	3.77	3.83	5.59	5.84
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.48	3.35	1.72	1.68	5.02	5.05
50th-Percentile Queue Length [ft]	61.99	83.63	42.90	41.95	125.54	126.15
95th-Percentile Queue Length [veh]	4.46	6.02	3.09	3.02	8.70	8.73
95th-Percentile Queue Length [ft]	111.58	150.53	77.22	75.51	217.41	218.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.09	47.09	48.78	48.78	48.78	3.77	3.80	0.00	5.59	5.72	5.84
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]	47.09			48.78			3.80			5.71		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.34											
Intersection LOS	A											
Intersection V/C	0.465											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.685

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	290	910	30	0	650	80	30	150	10	310	330	570
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	290	910	30	0	650	80	30	150	10	310	330	570
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	235	8	0	175	22	9	44	3	82	87	151
Total Analysis Volume [veh/h]	299	938	31	0	699	86	35	177	12	328	349	602
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	34	63	63	0	29	29	26	26	26	43	43	82
g / C, Green / Cycle	0.29	0.53	0.53	0.00	0.24	0.24	0.22	0.22	0.22	0.36	0.36	0.68
(v / s)_j Volume / Saturation Flow Rate	0.09	0.26	0.26	0.00	0.21	0.22	0.03	0.09	0.01	0.23	0.18	0.38
s, saturation flow rate [veh/h]	3514	1900	1869	1810	1900	1790	1039	1900	1503	1430	1900	1578
c, Capacity [veh/h]	1005	1000	984	0	457	431	117	412	326	503	681	1077
d1, Uniform Delay [s]	33.44	18.10	18.13	0.00	43.80	44.07	55.48	40.59	37.11	31.78	30.25	9.77
k, delay calibration	0.50	0.50	0.50	0.04	0.28	0.30	0.04	0.04	0.04	0.12	0.04	0.48
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.76	1.70	1.74	0.00	12.69	15.89	0.53	0.26	0.02	1.58	0.22	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.49	0.49	0.00	0.87	0.89	0.30	0.43	0.04	0.65	0.51	0.56
d, Delay for Lane Group [s/veh]	34.19	19.79	19.88	0.00	56.50	59.96	56.01	40.86	37.12	33.36	30.47	11.76
Lane Group LOS	C	B	B	A	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.49	8.78	8.72	0.00	12.85	12.80	1.05	4.52	0.28	7.63	7.95	8.09
50th-Percentile Queue Length [ft]	87.22	219.44	217.89	0.00	321.28	319.90	26.13	112.91	6.99	190.67	198.65	202.13
95th-Percentile Queue Length [veh]	6.28	13.64	13.56	0.00	18.73	18.66	1.88	8.00	0.50	12.16	12.57	12.75
95th-Percentile Queue Length [ft]	157.00	340.92	338.93	0.00	468.26	466.56	47.03	200.04	12.58	303.90	314.22	318.71

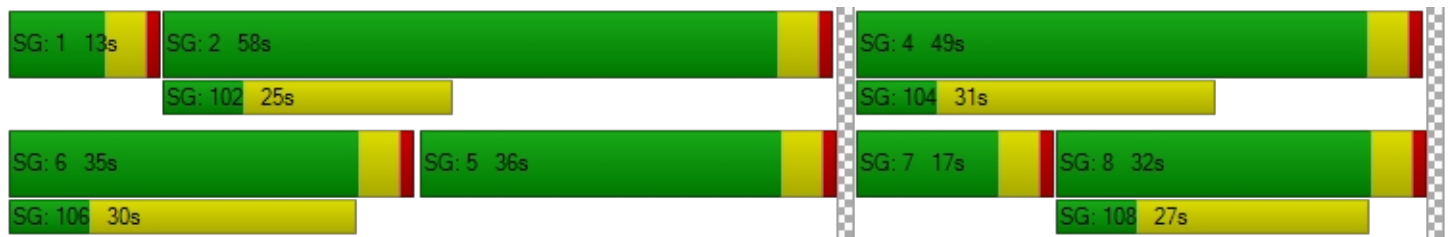


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.19	19.83	19.88	0.00	57.98	59.96	56.01	40.86	37.12	33.36	30.47	11.76
Movement LOS	C	B	B	A	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	23.22			58.20			43.02			22.41		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	31.90											
Intersection LOS	C											
Intersection V/C	0.685											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	30	550	570	80	170	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	550	570	80	170	110
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	148	153	22	47	30
Total Analysis Volume [veh/h]	32	593	613	86	186	120
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	71	71	12	12
g / C, Green / Cycle	0.78	0.78	0.71	0.71	0.12	0.12
(v / s)_j Volume / Saturation Flow Rate	0.04	0.31	0.32	0.05	0.10	0.08
s, saturation flow rate [veh/h]	892	1900	1900	1592	1810	1517
c, Capacity [veh/h]	688	1491	1346	1128	223	187
d1, Uniform Delay [s]	3.47	3.37	6.26	4.48	42.79	41.69
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.13	0.80	1.11	0.13	3.09	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.40	0.46	0.08	0.83	0.64
d, Delay for Lane Group [s/veh]	3.60	4.17	7.38	4.62	45.88	43.05
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.11	2.61	4.71	0.47	4.59	2.84
50th-Percentile Queue Length [ft]	2.76	65.27	117.81	11.82	114.82	70.93
95th-Percentile Queue Length [veh]	0.20	4.70	8.27	0.85	8.11	5.11
95th-Percentile Queue Length [ft]	4.98	117.49	206.81	21.28	202.69	127.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	3.60	4.17	7.38	4.62	45.88	43.05
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.14		7.04		44.77	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	13.01					
Intersection LOS	B					
Intersection V/C	0.430					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.622

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	710	70	140	780	280	120	340	150	220	260	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	710	70	140	780	280	120	340	150	220	260	120
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	188	19	37	206	74	32	90	40	58	68	31
Total Analysis Volume [veh/h]	95	752	74	148	823	295	127	359	158	231	273	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	46	46	12	50	50	25	25	25	19	19	19
g / C, Green / Cycle	0.07	0.38	0.38	0.10	0.41	0.41	0.21	0.21	0.21	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.21	0.05	0.08	0.23	0.19	0.07	0.19	0.10	0.13	0.14	0.08
s, saturation flow rate [veh/h]	1810	3618	1532	1810	3618	1553	1810	1900	1542	1810	1900	1548
c, Capacity [veh/h]	120	1379	584	176	1491	640	373	392	318	293	307	250
d1, Uniform Delay [s]	55.21	29.01	24.15	53.26	26.85	25.60	40.68	46.64	42.14	48.36	49.26	45.92
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.20	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.55	0.45	4.06	1.48	2.38	0.20	14.23	0.45	1.81	5.62	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.79	0.55	0.13	0.84	0.55	0.46	0.34	0.92	0.50	0.79	0.89	0.50
d, Delay for Lane Group [s/veh]	59.51	30.56	24.59	57.32	28.32	27.98	40.88	60.87	42.59	50.17	54.88	46.51
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.60	1.43	4.80	9.91	6.99	3.21	11.89	4.15	6.73	8.40	3.45
50th-Percentile Queue Length [ft]	73.84	215.08	35.83	120.06	247.81	174.78	80.28	297.23	103.80	168.17	210.02	86.21
95th-Percentile Queue Length [veh]	5.32	13.41	2.58	8.40	15.08	11.33	5.78	17.54	7.47	10.98	13.15	6.21
95th-Percentile Queue Length [ft]	132.92	335.34	64.49	209.91	376.90	283.18	144.51	438.60	186.83	274.51	328.85	155.18

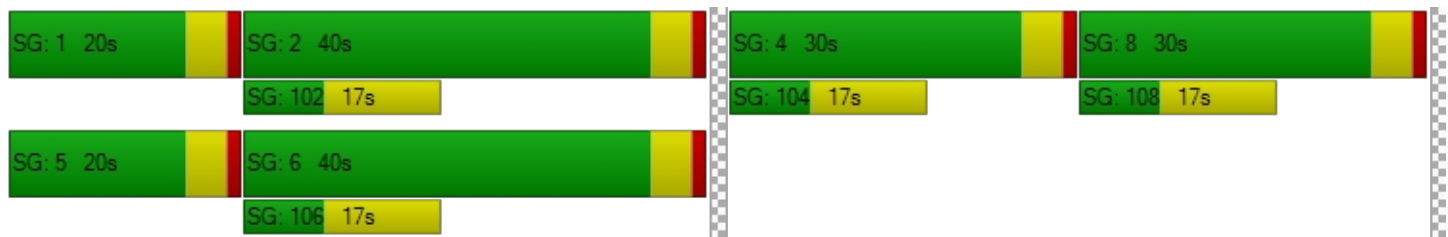


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	30.56	24.59	57.32	28.32	27.98	40.88	60.87	42.59	50.17	54.88	46.51
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	33.07			31.63			52.44			51.48		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.50											
Intersection LOS	D											
Intersection V/C	0.622											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌			⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	100	460	70	40	430	100	70	460	90	60	350	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	460	70	40	430	100	70	460	90	60	350	80
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	20	11	119	28	19	123	24	17	98	22
Total Analysis Volume [veh/h]	113	520	79	44	475	110	75	494	97	67	393	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	29	29	22	22	22	22	22	22
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.13	0.32	0.05	0.32	0.07	0.26	0.06	0.07	0.21	0.06
s, saturation flow rate [veh/h]	843	1848	832	1831	1005	1900	1571	917	1900	1561
c, Capacity [veh/h]	294	884	288	875	287	700	579	219	700	576
d1, Uniform Delay [s]	21.82	12.10	20.21	12.02	22.57	16.17	12.75	25.77	15.09	12.70
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.77	4.17	1.13	4.04	0.18	0.49	0.05	0.29	0.26	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

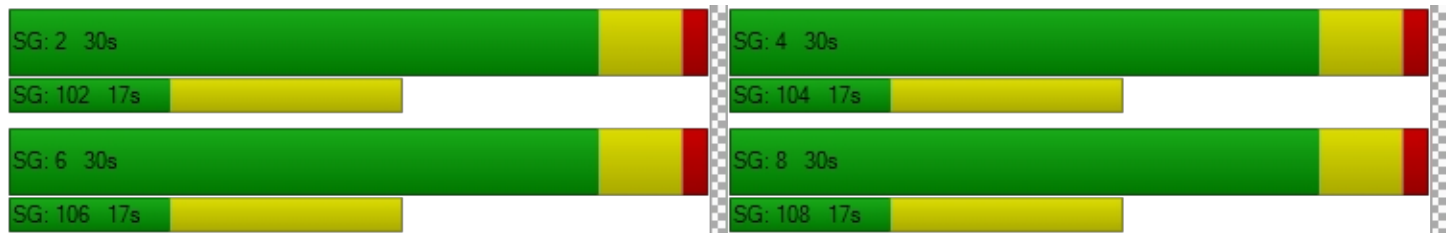
X, volume / capacity	0.38	0.68	0.15	0.67	0.26	0.71	0.17	0.31	0.56	0.16
d, Delay for Lane Group [s/veh]	25.58	16.26	21.33	16.05	22.75	16.66	12.80	26.07	15.35	12.74
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.69	6.39	0.58	5.99	0.89	5.04	0.77	0.87	3.72	0.71
50th-Percentile Queue Length [ft]	42.21	159.69	14.38	149.78	22.21	125.97	19.34	21.68	93.01	17.87
95th-Percentile Queue Length [veh]	3.04	10.53	1.04	10.01	1.60	8.72	1.39	1.56	6.70	1.29
95th-Percentile Queue Length [ft]	75.97	263.32	25.88	250.14	39.98	218.01	34.81	39.03	167.41	32.16

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.58	16.26	16.26	21.33	16.05	16.05	22.75	16.66	12.80	26.07	15.35	12.74
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.74			16.42			16.78			16.23		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.84											
Intersection LOS	B											
Intersection V/C	0.584											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	60	1110	110	70	1150	140	80	420	150	130	330	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1110	110	70	1150	140	80	420	150	130	330	60
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	300	30	19	319	39	21	109	39	35	89	16
Total Analysis Volume [veh/h]	65	1201	119	78	1274	155	83	436	156	140	356	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	68	57	57	68	57	57	42	29	29	42	31	31
g / C, Green / Cycle	0.57	0.48	0.48	0.57	0.48	0.48	0.35	0.25	0.25	0.35	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.11	0.35	0.36	0.13	0.38	0.40	0.07	0.23	0.10	0.12	0.19	0.04
s, saturation flow rate [veh/h]	566	1900	1815	608	1900	1780	1208	1900	1504	1187	1900	1507
c, Capacity [veh/h]	280	906	865	310	910	853	339	465	368	293	494	392
d1, Uniform Delay [s]	20.24	25.34	25.61	18.17	26.30	26.95	28.16	44.36	38.14	30.66	40.38	34.30
k, delay calibration	0.50	0.50	0.50	0.38	0.50	0.50	0.04	0.16	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	5.36	6.01	1.49	7.14	9.04	0.14	12.45	0.29	0.45	0.75	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.23	0.74	0.75	0.25	0.80	0.83	0.24	0.94	0.42	0.48	0.72	0.17
d, Delay for Lane Group [s/veh]	22.16	30.70	31.63	19.66	33.44	35.99	28.30	56.81	38.42	31.11	41.13	34.37
Lane Group LOS	C	C	C	B	C	D	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.91	16.12	16.00	1.04	18.47	18.77	1.62	14.08	3.87	2.83	9.53	1.47
50th-Percentile Queue Length [ft]	22.69	403.11	399.91	26.11	461.73	469.16	40.38	352.04	96.64	70.79	238.33	36.76
95th-Percentile Queue Length [veh]	1.63	22.71	22.56	1.88	25.52	25.87	2.91	20.24	6.96	5.10	14.60	2.65
95th-Percentile Queue Length [ft]	40.84	567.75	563.89	46.99	637.93	646.78	72.68	505.89	173.95	127.42	364.93	66.16



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.16	31.11	31.63	19.66	34.54	35.99	28.30	56.81	38.42	31.11	41.13	34.37
Movement LOS	C	C	C	B	C	D	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	30.74			33.92			49.06			37.85		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.86											
Intersection LOS	D											
Intersection V/C	0.701											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.576

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	60	210	30	20	170	20	50	570	60	20	500	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	210	30	20	170	20	50	570	60	20	500	50
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	59	8	6	54	6	13	144	15	6	140	14
Total Analysis Volume [veh/h]	67	235	34	26	218	26	50	575	61	22	559	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	80	80	80	80
g / C, Green / Cycle	0.25	0.25	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.23	0.17	0.06	0.34	0.03	0.33
s, saturation flow rate [veh/h]	1435	1609	820	1859	804	1862
c, Capacity [veh/h]	400	441	461	1246	446	1247
d1, Uniform Delay [s]	43.95	39.22	16.72	9.93	16.71	9.76
k, delay calibration	0.30	0.13	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.04	1.69	0.48	1.50	0.21	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

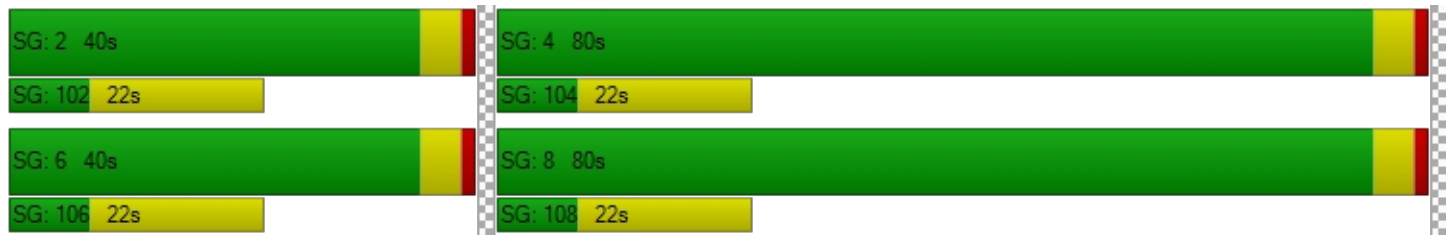
X, volume / capacity	0.84	0.61	0.11	0.51	0.05	0.49
d, Delay for Lane Group [s/veh]	56.00	40.90	17.20	11.43	16.91	11.16
Lane Group LOS	E	D	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	11.00	7.13	0.80	8.13	0.35	7.72
50th-Percentile Queue Length [ft]	274.88	178.19	20.06	203.26	8.69	192.88
95th-Percentile Queue Length [veh]	16.43	11.51	1.44	12.81	0.63	12.27
95th-Percentile Queue Length [ft]	410.84	287.65	36.10	320.16	15.64	306.76

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.00	56.00	56.00	40.90	40.90	40.90	17.20	11.43	11.43	16.91	11.16	11.16
Movement LOS	E	E	E	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	56.00			40.90			11.85			11.35		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.44											
Intersection LOS	C											
Intersection V/C	0.576											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	850	60	90	840	80	80	490	70	190	410	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	850	60	90	840	80	80	490	70	190	410	30
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	235	17	24	221	21	21	129	18	53	114	8
Total Analysis Volume [veh/h]	100	940	66	95	886	84	84	514	73	211	456	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	61	51	51	61	51	51	50	34	34	50	40	40
g / C, Green / Cycle	0.51	0.43	0.43	0.51	0.42	0.42	0.42	0.28	0.28	0.42	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.13	0.27	0.27	0.13	0.26	0.26	0.08	0.27	0.05	0.18	0.24	0.02
s, saturation flow rate [veh/h]	748	1900	1843	727	1900	1822	1084	1900	1525	1153	1900	1502
c, Capacity [veh/h]	347	809	785	336	806	773	338	540	433	330	636	503
d1, Uniform Delay [s]	18.53	26.98	27.05	18.70	26.82	26.94	24.43	42.14	32.28	28.26	34.92	27.14
k, delay calibration	0.50	0.50	0.50	0.40	0.50	0.50	0.07	0.34	0.04	0.04	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	3.68	3.87	1.67	3.44	3.69	0.23	22.39	0.07	0.77	2.34	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.29	0.63	0.63	0.28	0.61	0.62	0.25	0.95	0.17	0.64	0.72	0.07
d, Delay for Lane Group [s/veh]	20.61	30.66	30.92	20.38	30.26	30.63	24.66	64.53	32.35	29.03	37.26	27.16
Lane Group LOS	C	C	C	C	C	C	C	E	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.63	12.11	11.90	1.51	11.60	11.34	1.46	17.97	1.60	3.97	11.84	0.65
50th-Percentile Queue Length [ft]	40.85	302.71	297.54	37.85	289.98	283.55	36.53	449.24	39.95	99.34	295.98	16.13
95th-Percentile Queue Length [veh]	2.94	17.82	17.56	2.73	17.18	16.87	2.63	24.92	2.88	7.15	17.48	1.16
95th-Percentile Queue Length [ft]	73.54	445.38	438.98	68.13	429.61	421.63	65.75	623.04	71.92	178.81	437.05	29.04

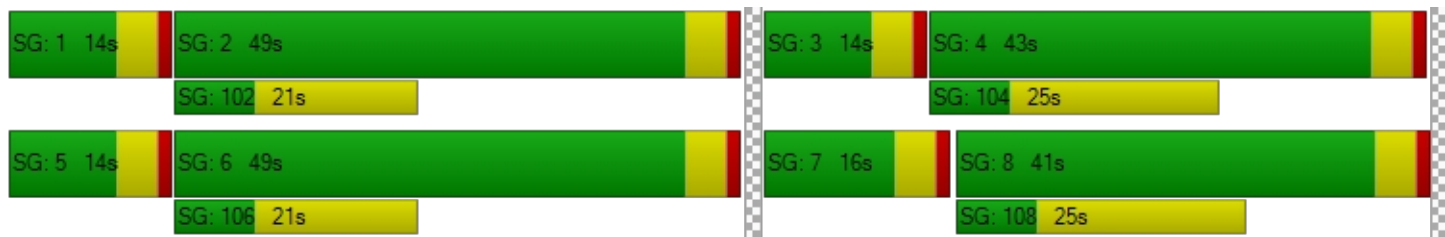


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.61	30.78	30.92	20.38	30.42	30.63	24.66	64.53	32.35	29.03	37.26	27.16
Movement LOS	C	C	C	C	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	29.87			29.54			56.04			34.31		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	35.60											
Intersection LOS	D											
Intersection V/C	0.651											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	80	510	140	20	230	50	50	520	100	0	500	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	510	140	20	230	50	50	520	100	0	500	50
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	141	39	5	63	14	13	137	26	0	146	15
Total Analysis Volume [veh/h]	89	565	155	22	250	54	53	549	106	0	583	58
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.09	0.33	0.11	0.03	0.15	0.04	0.07	0.32	0.08	0.00	0.34	0.05
s, saturation flow rate [veh/h]	1029	1710	1380	773	1710	1416	751	1710	1314	785	1710	1280
c, Capacity [veh/h]	436	844	681	206	844	699	183	640	492	205	640	479
d1, Uniform Delay [s]	17.50	13.36	10.08	26.96	10.48	9.30	30.02	20.12	14.85	0.00	20.72	14.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.12	0.04	0.04	0.16	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	4.19	0.78	1.04	0.89	0.22	0.32	3.91	0.08	0.00	7.53	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

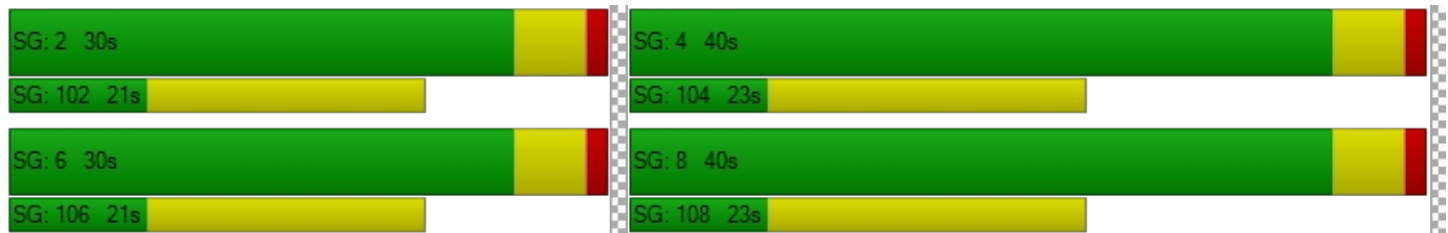
X, volume / capacity	0.20	0.67	0.23	0.11	0.30	0.08	0.29	0.86	0.22	0.00	0.91	0.12
d, Delay for Lane Group [s/veh]	18.56	17.55	10.85	28.00	11.37	9.51	30.35	24.02	14.94	0.00	28.25	14.35
Lane Group LOS	B	B	B	C	B	A	C	C	B	A	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.10	6.65	1.32	0.37	2.18	0.42	0.83	8.00	1.05	0.00	9.33	0.55
50th-Percentile Queue Length [ft]	27.62	166.31	33.00	9.24	54.42	10.48	20.71	199.98	26.31	0.00	233.24	13.86
95th-Percentile Queue Length [veh]	1.99	10.88	2.38	0.67	3.92	0.75	1.49	12.64	1.89	0.00	14.34	1.00
95th-Percentile Queue Length [ft]	49.71	272.06	59.40	16.64	97.96	18.86	37.28	315.93	47.36	0.00	358.47	24.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.56	17.55	10.85	28.00	11.37	9.51	30.35	24.02	14.94	0.00	28.25	14.35
Movement LOS	B	B	B	C	B	A	C	C	B	A	C	B
d_A, Approach Delay [s/veh]	16.38			12.19			23.14			26.99		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.49											
Intersection LOS	C											
Intersection V/C	0.671											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	40	440	180	0	530	130	70	460	140	190	480	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	440	180	0	530	130	70	460	140	190	480	90
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	121	50	0	141	35	19	125	38	55	138	26
Total Analysis Volume [veh/h]	44	485	199	0	564	138	76	501	152	219	553	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	40	40	31	31	31	6	26	26	10	30	30
g / C, Green / Cycle	0.05	0.45	0.45	0.34	0.34	0.34	0.07	0.28	0.28	0.12	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.02	0.26	0.13	0.00	0.19	0.20	0.04	0.26	0.10	0.12	0.18	0.18
s, saturation flow rate [veh/h]	1810	1900	1540	925	1900	1719	1810	1900	1481	1810	1900	1752
c, Capacity [veh/h]	96	848	687	196	650	588	121	541	422	209	634	585
d1, Uniform Delay [s]	41.43	18.56	15.87	0.00	24.09	24.30	40.95	31.30	25.69	39.85	24.34	24.48
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.24	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	2.80	1.06	0.00	3.42	4.09	1.98	14.19	0.19	46.55	0.26	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.46	0.57	0.29	0.00	0.56	0.58	0.63	0.93	0.36	1.05	0.53	0.55
d, Delay for Lane Group [s/veh]	42.70	21.35	16.94	0.00	27.51	28.40	42.93	45.49	25.88	86.40	24.60	24.77
Lane Group LOS	D	C	B	A	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.97	7.80	2.71	0.00	6.68	6.41	1.69	12.35	2.57	7.21	5.61	5.35
50th-Percentile Queue Length [ft]	24.32	194.89	67.70	0.00	167.06	160.18	42.26	308.82	64.17	180.34	140.37	133.68
95th-Percentile Queue Length [veh]	1.75	12.37	4.87	0.00	10.92	10.56	3.04	18.12	4.62	11.83	9.50	9.14
95th-Percentile Queue Length [ft]	43.78	309.37	121.85	0.00	273.04	263.95	76.07	452.92	115.50	295.65	237.52	228.49

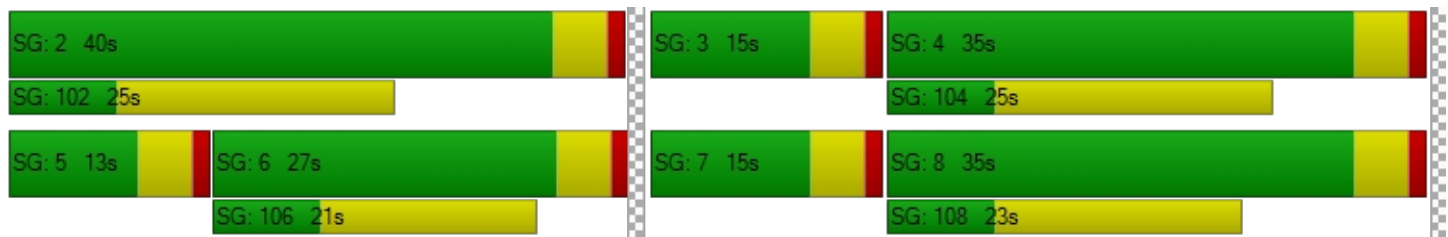


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.70	21.35	16.94	0.00	27.83	28.40	42.93	45.49	25.88	86.40	24.67	24.77
Movement LOS	D	C	B	A	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	21.44			27.94			41.13			40.11		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.06											
Intersection LOS	C											
Intersection V/C	0.640											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.719

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	20	370	60	220	0	150	0	1100	90	210	920	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	370	60	220	0	150	0	1100	90	210	920	0
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	1.0000	0.9224	0.9224	0.8935	0.8935	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	121	20	60	0	41	0	298	24	59	257	0
Total Analysis Volume [veh/h]	26	485	79	240	0	164	0	1193	98	235	1030	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			173			0		
Bicycle Volume [bicycles/h]	32			6			28			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	35	0	22	0	39	0	42	0	21	63	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	20	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	4	29	29	10	57	45	45	16	66
g / C, Green / Cycle	0.03	0.25	0.25	0.09	0.47	0.38	0.38	0.14	0.55
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.17	0.07	0.06	0.34	0.35	0.13	0.28
s, saturation flow rate [veh/h]	1810	1900	1644	3514	2816	1900	1827	1810	3618
c, Capacity [veh/h]	63	466	403	303	1328	720	692	247	2003
d1, Uniform Delay [s]	56.75	40.31	41.11	53.78	17.79	35.07	35.81	51.42	16.71
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.38	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.50	0.86	1.78	0.02	16.12	21.19	38.64	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

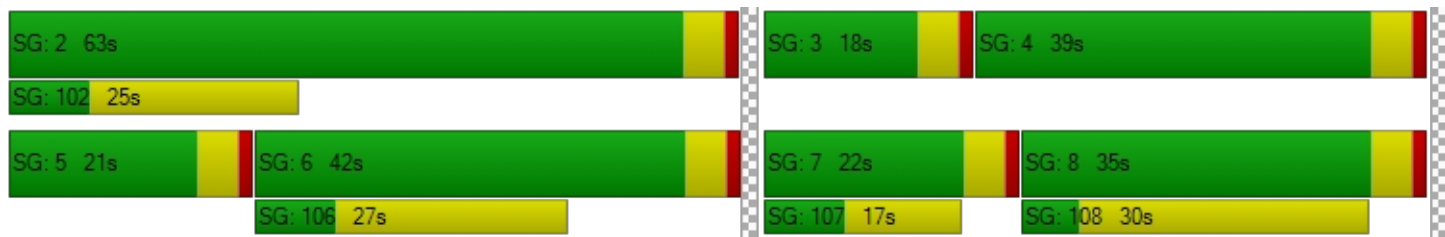
X, volume / capacity	0.42	0.62	0.69	0.79	0.12	0.90	0.93	0.95	0.51
d, Delay for Lane Group [s/veh]	58.39	40.81	41.97	55.57	17.81	51.19	57.00	90.06	17.66
Lane Group LOS	E	D	D	E	B	D	E	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.80	7.62	7.49	3.63	1.28	19.98	21.19	10.01	9.87
50th-Percentile Queue Length [ft]	20.04	190.51	187.15	90.72	32.10	499.61	529.71	250.22	246.64
95th-Percentile Queue Length [veh]	1.44	12.15	11.97	6.53	2.31	27.32	28.74	15.20	15.02
95th-Percentile Queue Length [ft]	36.07	303.69	299.33	163.30	57.79	682.90	718.44	379.94	375.42

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.39	41.28	41.97	55.57	0.00	17.81	0.00	53.85	57.00	90.06	17.66	0.00
Movement LOS	E	D	D	E		B		D	E	F	B	
d_A, Approach Delay [s/veh]	42.13			40.24			54.09			31.11		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	42.34											
Intersection LOS	D											
Intersection V/C	0.719											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1120	90	60	1330	30	50	110	60	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1120	90	60	1330	30	50	110	60	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	300	24	15	343	8	15	33	18	11	29	7
Total Analysis Volume [veh/h]	32	1201	97	62	1372	31	60	131	72	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	17	17
g / C, Green / Cycle	0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.08	0.35	0.35	0.14	0.37	0.37	0.16	0.12
s, saturation flow rate [veh/h]	390	1900	1842	431	1900	1878	1650	1610
c, Capacity [veh/h]	252	1266	1228	278	1266	1252	415	407
d1, Uniform Delay [s]	14.89	6.77	6.80	14.83	7.04	7.06	28.76	27.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.04	1.52	1.59	1.85	1.76	1.80	0.60	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.52	0.52	0.22	0.56	0.56	0.63	0.46
d, Delay for Lane Group [s/veh]	15.93	8.29	8.39	16.67	8.80	8.86	29.36	27.47
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.42	4.84	4.77	0.82	5.41	5.41	4.50	3.00
50th-Percentile Queue Length [ft]	10.42	120.95	119.19	20.59	135.35	135.26	112.44	74.98
95th-Percentile Queue Length [veh]	0.75	8.45	8.35	1.48	9.23	9.22	7.98	5.40
95th-Percentile Queue Length [ft]	18.76	211.13	208.72	37.06	230.75	230.62	199.38	134.97

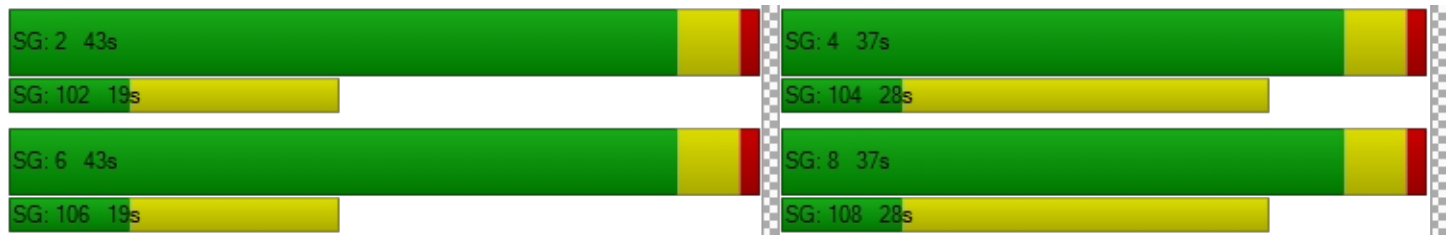


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.93	8.33	8.39	16.67	8.83	8.86	29.36	29.36	29.36	27.47	27.47	27.47
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.52			9.16			29.36			27.47		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.59											
Intersection LOS	B											
Intersection V/C	0.532											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	1010	30	10	1000	20	30	140	60	20	160	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1010	30	10	1000	20	30	140	60	20	160	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	266	8	3	259	5	9	42	18	6	44	3
Total Analysis Volume [veh/h]	42	1065	32	10	1038	21	36	170	73	22	176	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.08	0.29	0.29	0.02	0.28	0.28	0.16	0.12
s, saturation flow rate [veh/h]	540	1900	1874	521	1900	1882	1725	1788
c, Capacity [veh/h]	357	1260	1243	344	1260	1248	433	446
d1, Uniform Delay [s]	11.06	6.38	6.39	10.70	6.29	6.29	28.66	27.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.67	1.11	1.13	0.16	1.04	1.05	0.60	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

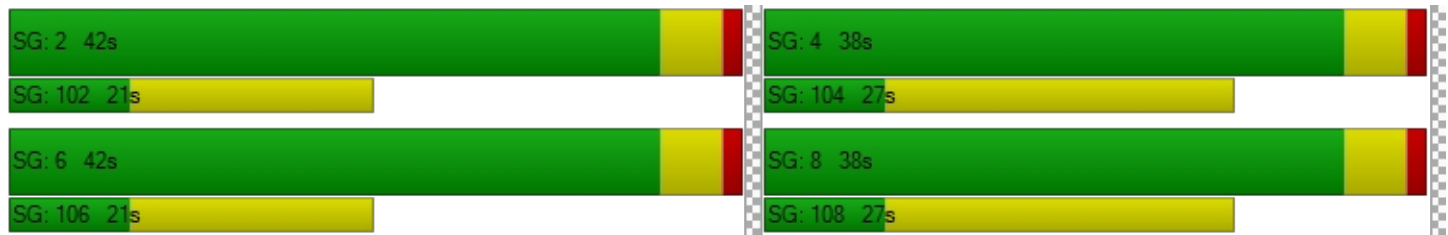
X, volume / capacity	0.12	0.44	0.44	0.03	0.42	0.42	0.64	0.47
d, Delay for Lane Group [s/veh]	11.73	7.49	7.52	10.86	7.32	7.35	29.26	27.47
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.45	3.96	3.93	0.10	3.75	3.74	4.75	3.36
50th-Percentile Queue Length [ft]	11.16	98.93	98.23	2.54	93.86	93.40	118.84	84.09
95th-Percentile Queue Length [veh]	0.80	7.12	7.07	0.18	6.76	6.72	8.33	6.05
95th-Percentile Queue Length [ft]	20.08	178.07	176.81	4.57	168.94	168.12	208.23	151.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.73	7.50	7.52	10.86	7.33	7.35	29.26	29.26	29.26	27.47	27.47	27.47
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.66			7.37			29.26			27.47		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.31											
Intersection LOS	B											
Intersection V/C	0.453											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	50	1250	10	30	1330	90	20	90	30	100	110	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	1250	10	30	1330	90	20	90	30	100	110	50
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	369	3	8	339	23	5	24	8	29	32	14
Total Analysis Volume [veh/h]	59	1476	12	31	1356	92	22	97	32	115	126	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	21	21	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.16	0.39	0.39	0.09	0.38	0.39	0.10	0.02	0.19	0.04
s, saturation flow rate [veh/h]	374	1900	1893	360	1900	1847	1147	1525	1300	1564
c, Capacity [veh/h]	224	1175	1170	218	1175	1142	359	407	413	417
d1, Uniform Delay [s]	19.49	9.59	9.60	18.18	9.47	9.54	23.36	21.96	26.39	22.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.84	2.61	2.63	1.37	2.48	2.63	0.20	0.03	0.49	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.63	0.64	0.14	0.62	0.63	0.33	0.08	0.58	0.14
d, Delay for Lane Group [s/veh]	22.33	12.20	12.23	19.54	11.94	12.17	23.56	21.99	26.88	22.37
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.96	7.44	7.44	0.46	7.19	7.16	1.69	0.43	3.95	0.79
50th-Percentile Queue Length [ft]	23.93	186.11	186.08	11.58	179.71	178.97	42.30	10.85	98.81	19.64
95th-Percentile Queue Length [veh]	1.72	11.92	11.92	0.83	11.59	11.55	3.05	0.78	7.11	1.41
95th-Percentile Queue Length [ft]	43.07	297.97	297.93	20.85	289.64	288.67	76.14	19.53	177.87	35.35

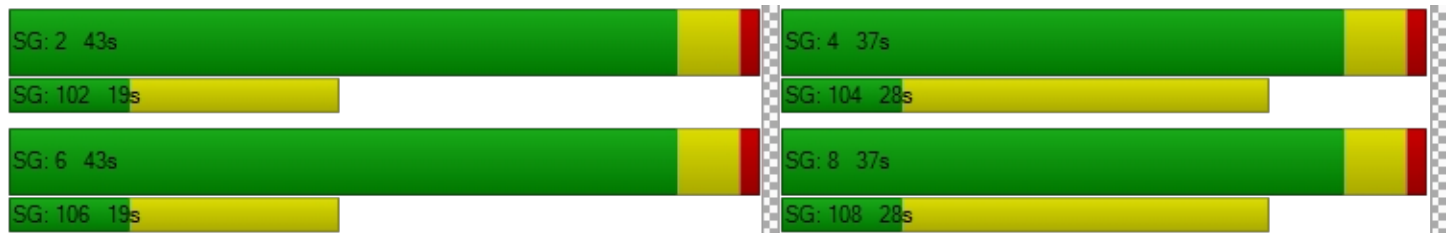


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.33	12.22	12.23	19.54	12.05	12.17	23.56	23.56	21.99	26.88	26.88	22.37
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.60			12.21			23.23			26.02		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.05											
Intersection LOS	B											
Intersection V/C	0.578											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1430	100	80	1360	240	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1430	100	80	1360	240	100
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	425	30	22	378	66	28
Total Analysis Volume [veh/h]	1699	119	89	1513	265	110
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_j Volume / Saturation Flow Rate	0.49	0.50	0.35	0.43	0.15	0.07
s, saturation flow rate [veh/h]	1863	1807	256	3547	1728	1560
c, Capacity [veh/h]	1337	1297	183	2546	311	281
d1, Uniform Delay [s]	6.99	7.20	24.69	6.24	35.69	32.50
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	3.18	8.98	1.03	6.58	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

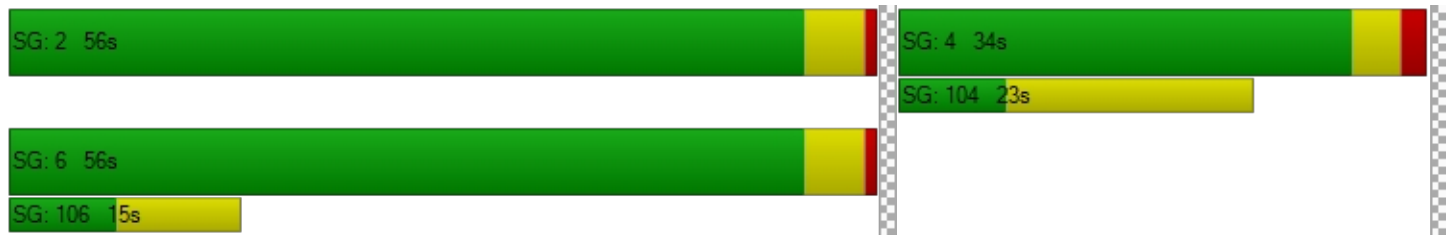
X, volume / capacity	0.68	0.70	0.49	0.59	0.85	0.39
d, Delay for Lane Group [s/veh]	9.80	10.38	33.68	7.27	42.27	33.40
Lane Group LOS	A	B	C	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.04	8.36	2.10	5.87	6.00	2.12
50th-Percentile Queue Length [ft]	201.08	209.00	52.57	146.65	150.12	53.12
95th-Percentile Queue Length [veh]	12.69	13.10	3.79	9.84	10.02	3.82
95th-Percentile Queue Length [ft]	317.36	327.54	94.63	245.96	250.58	95.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.07	10.38	33.68	7.27	42.27	33.40
Movement LOS	B	B	C	A	D	C
d_A, Approach Delay [s/veh]	10.09		8.74		39.67	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	12.44					
Intersection LOS	B					
Intersection V/C	0.656					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	1000	70	40	1000	40	80	400	80	40	270	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1000	70	40	1000	40	80	400	80	40	270	50
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	278	19	10	254	10	21	104	21	12	80	15
Total Analysis Volume [veh/h]	22	1114	78	41	1014	41	83	416	83	47	319	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	27	23	23
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.04	0.32	0.32	0.09	0.28	0.28	0.36	0.27
s, saturation flow rate [veh/h]	543	1900	1842	477	1900	1864	1619	1564
c, Capacity [veh/h]	236	865	838	202	865	849	702	678
d1, Uniform Delay [s]	19.29	13.00	13.06	22.50	12.33	12.35	17.10	14.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.78	4.62	4.90	2.26	3.25	3.36	7.43	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.70	0.70	0.20	0.61	0.62	0.83	0.63
d, Delay for Lane Group [s/veh]	20.07	17.63	17.97	24.75	15.58	15.71	24.53	16.02
Lane Group LOS	C	B	B	C	B	B	C	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.29	6.57	6.51	0.62	5.35	5.30	7.86	4.17
50th-Percentile Queue Length [ft]	7.13	164.33	162.78	15.41	133.63	132.60	196.44	104.19
95th-Percentile Queue Length [veh]	0.51	10.78	10.70	1.11	9.14	9.08	12.45	7.50
95th-Percentile Queue Length [ft]	12.84	269.45	267.39	27.73	228.42	227.03	311.37	187.55

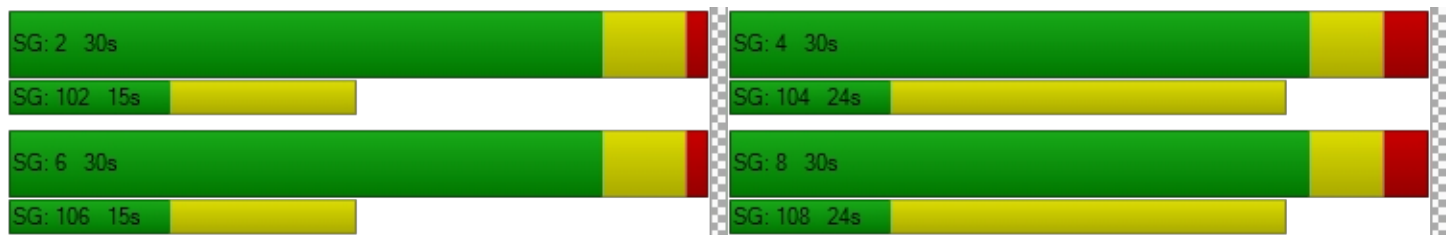


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.07	17.78	17.97	24.75	15.64	15.71	24.53	24.53	24.53	16.02	16.02	16.02
Movement LOS	C	B	B	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	17.84			15.98			24.53			16.02		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	18.17											
Intersection LOS	B											
Intersection V/C	0.680											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.629

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	350	90	30	130	30	70	490	60	20	370	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	350	90	30	130	30	70	490	60	20	370	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	89	23	10	42	10	18	129	16	5	100	5
Total Analysis Volume [veh/h]	31	358	92	39	169	39	74	517	63	22	400	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	20	20	20	20	20	31	31
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.34	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.03	0.25	0.04	0.09	0.03	0.37	0.24
s, saturation flow rate [veh/h]	1226	1769	937	1863	1524	1747	1835
c, Capacity [veh/h]	404	598	184	630	515	955	996
d1, Uniform Delay [s]	18.17	17.64	27.18	14.47	13.50	11.24	9.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.94	0.57	0.23	0.06	3.98	1.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

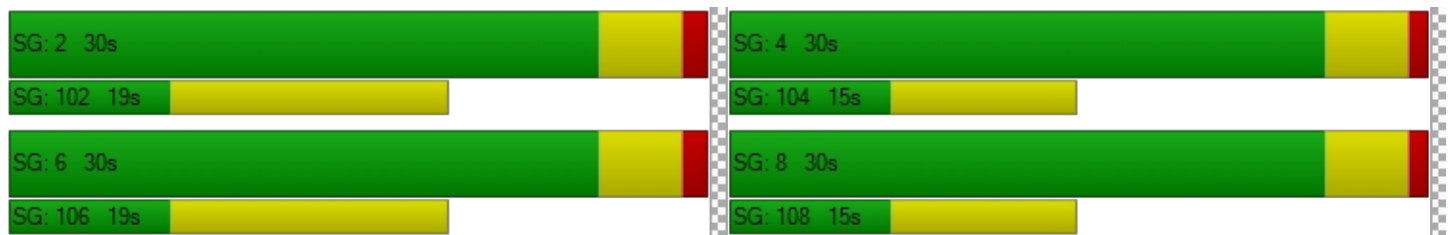
X, volume / capacity	0.08	0.75	0.21	0.27	0.08	0.68	0.45
d, Delay for Lane Group [s/veh]	18.25	19.58	27.75	14.69	13.56	15.22	10.93
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	5.11	0.54	1.55	0.34	6.17	3.35
50th-Percentile Queue Length [ft]	7.94	127.66	13.59	38.87	8.38	154.34	83.84
95th-Percentile Queue Length [veh]	0.57	8.81	0.98	2.80	0.60	10.25	6.04
95th-Percentile Queue Length [ft]	14.28	220.31	24.47	69.97	15.08	256.21	150.91

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.25	19.58	19.58	27.75	14.69	13.56	15.22	15.22	15.22	10.93	10.93	10.93
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.50			16.57			15.22			10.93		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.49											
Intersection LOS	B											
Intersection V/C	0.629											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	500	0	160	0	0	0	0	1400	580	60	1560	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	500	0	160	0	0	0	0	1400	580	60	1560	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	0	48	0	0	0	0	396	164	16	422	0
Total Analysis Volume [veh/h]	604	0	193	0	0	0	0	1583	656	65	1689	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	0	73	73	110	73	73	73
g / C, Green / Cycle	0.28	0.28	0.00	0.61	0.61	0.92	0.61	0.61	0.61
(v / s)_j Volume / Saturation Flow Rate	0.23	0.23	0.00	0.00	0.31	0.41	0.20	0.31	0.31
s, saturation flow rate [veh/h]	1810	1674	1863	290	5176	1615	328	3618	1900
c, Capacity [veh/h]	498	460	7	179	3136	1479	195	2192	1151
d1, Uniform Delay [s]	40.70	40.98	0.00	0.00	13.40	0.71	25.95	13.41	13.41
k, delay calibration	0.12	0.13	0.11	0.50	0.50	0.44	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.90	5.08	0.00	0.00	0.58	0.86	4.56	0.84	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.84	0.00	0.00	0.50	0.44	0.33	0.51	0.51
d, Delay for Lane Group [s/veh]	44.60	46.06	0.00	0.00	13.99	1.57	30.51	14.25	15.00
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	11.79	11.36	0.00	0.00	7.79	0.35	1.59	8.25	8.90
50th-Percentile Queue Length [ft]	294.64	284.06	0.00	0.00	194.64	8.81	39.64	206.23	222.62
95th-Percentile Queue Length [veh]	17.42	16.89	0.00	0.00	12.36	0.63	2.85	12.96	13.80
95th-Percentile Queue Length [ft]	435.40	422.27	0.00	0.00	309.04	15.85	71.35	323.99	344.97

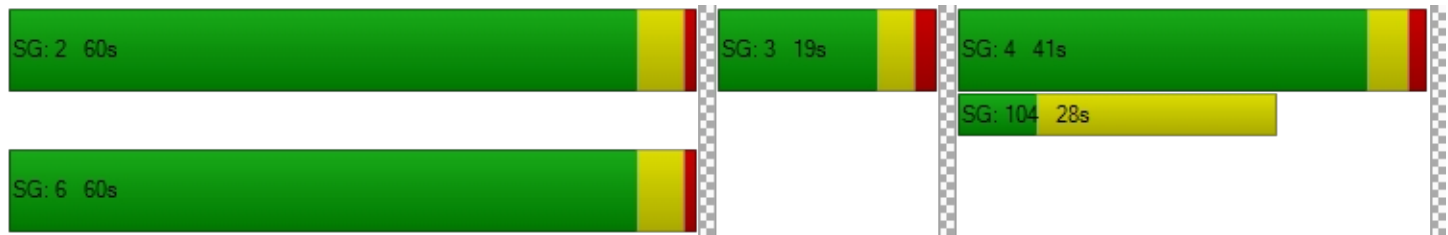


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.08	46.06	46.06	0.00	0.00	0.00	0.00	13.99	1.57	30.51	14.50	15.00
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.31			0.00			10.35			15.10		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	17.91											
Intersection LOS	B											
Intersection V/C	0.538											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	280	90	0	230	30	0	160	90	10	110	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	280	90	0	230	30	0	160	90	10	110	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	80	26	0	72	9	0	49	28	3	35	6
Total Analysis Volume [veh/h]	23	322	103	0	289	38	0	196	110	13	138	25
Pedestrian Volume [ped/h]	10			5			6			7		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	574	547	538	497
Degree of Utilization, x	0.78	0.60	0.57	0.35

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	7.28	3.91	3.53	1.58
95th-Percentile Queue Length [ft]	181.98	97.75	88.26	39.59
Approach Delay [s/veh]	27.95	18.91	18.16	14.17
Approach LOS	D	C	C	B
Intersection Delay [s/veh]	21.29			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.408

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	580	640	30	60	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	580	640	30	60	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	161	167	8	19	6
Total Analysis Volume [veh/h]	11	645	668	31	74	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	11	11	11	3
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.15
(v / s)_j Volume / Saturation Flow Rate	0.01	0.34	0.35	0.02	0.06
s, saturation flow rate [veh/h]	778	1900	1900	1588	1756
c, Capacity [veh/h]	387	894	894	747	261
d1, Uniform Delay [s]	9.61	5.13	5.22	3.45	9.28
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.42	0.48	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

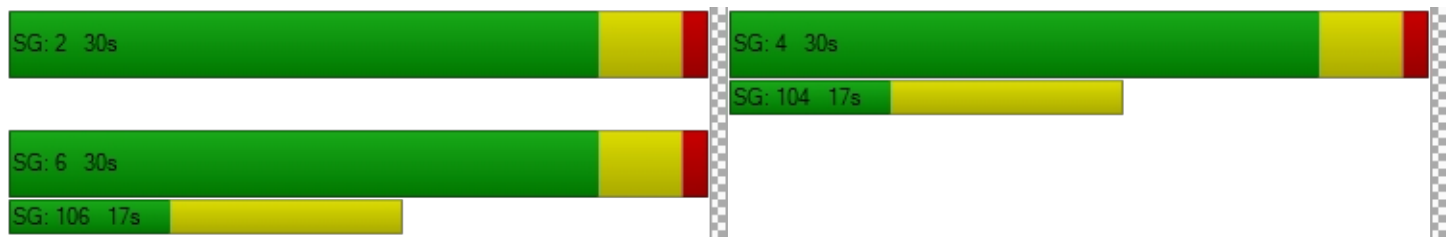
X, volume / capacity	0.03	0.72	0.75	0.04	0.38
d, Delay for Lane Group [s/veh]	9.62	5.54	5.70	3.46	9.62
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.03	0.73	0.78	0.02	0.35
50th-Percentile Queue Length [ft]	0.87	18.27	19.50	0.55	8.64
95th-Percentile Queue Length [veh]	0.06	1.32	1.40	0.04	0.62
95th-Percentile Queue Length [ft]	1.57	32.89	35.09	0.99	15.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.62	5.54	5.70	3.46	9.62	9.62
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.61		5.60		9.62	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.88					
Intersection LOS	A					
Intersection V/C	0.408					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	70	1300	10	10	1430	680	740	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	70	1300	10	10	1430	680	740	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	18	332	3	3	391	186	226	3	34
Total Analysis Volume [veh/h]	0	0	0	72	1328	10	10	1566	745	902	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		51	51	51	51	51	85	30	30
g / C, Green / Cycle		0.57	0.57	0.57	0.57	0.57	0.95	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate		0.22	0.35	0.35	0.02	0.43	0.46	0.26	0.09
s, saturation flow rate [veh/h]		334	1900	1895	407	3618	1615	3514	1600
c, Capacity [veh/h]		151	1081	1078	204	2058	1525	1154	526
d1, Uniform Delay [s]		35.60	12.87	12.87	22.21	14.69	0.26	27.20	22.22
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		10.47	2.67	2.68	0.45	2.71	1.12	1.19	0.28
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.48	0.62	0.62	0.05	0.76	0.49	0.78	0.27
d, Delay for Lane Group [s/veh]		46.07	15.54	15.55	22.67	17.41	1.38	28.39	22.50
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		2.10	10.34	10.33	0.17	11.34	0.48	8.46	2.20
50th-Percentile Queue Length [ft]		52.60	258.55	258.14	4.29	283.62	11.88	211.60	54.96
95th-Percentile Queue Length [veh]		3.79	15.62	15.60	0.31	16.87	0.86	13.24	3.96
95th-Percentile Queue Length [ft]		94.69	390.40	389.89	7.72	421.72	21.39	330.88	98.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.07	15.55	15.55	22.67	17.41	1.38	28.39	22.50	22.50
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			17.11			12.29			27.58		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.690											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	45.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	330	290	410	0	240	620	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	330	290	410	0	240	620	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	86	76	107	0	63	162	0	21
Total Analysis Volume [veh/h]	0	0	0	0	346	304	427	0	250	650	0	84
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.19	0.19	0.24	0.13	0.34	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		36.18	15.80	35.31	4.54	21.22	14.73
k, delay calibration		0.20	0.31	0.45	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		27.88	1.04	71.50	0.31	6.80	0.33
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.99	0.41	1.09	0.19	0.77	0.12
d, Delay for Lane Group [s/veh]		64.06	16.84	106.80	4.85	28.01	15.06
Lane Group LOS		E	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		10.30	4.31	16.06	1.41	12.49	1.04
50th-Percentile Queue Length [ft]		257.47	107.70	401.55	35.32	312.33	26.11
95th-Percentile Queue Length [veh]		15.56	7.71	23.77	2.54	18.29	1.88
95th-Percentile Queue Length [ft]		389.05	192.79	594.13	63.58	457.25	47.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	64.06	16.84	106.80	0.00	4.85	28.01	0.00	15.06
Movement LOS					E	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			41.97			69.15			26.53		
Approach LOS	A			D			E			C		
d_I, Intersection Delay [s/veh]	45.40											
Intersection LOS	D											
Intersection V/C	0.769											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	110	250	140	100	70	10	60	1210	50	0	900	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	250	140	100	70	10	60	1210	50	0	900	70
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	69	39	28	20	3	17	335	14	0	261	20
Total Analysis Volume [veh/h]	122	277	155	112	78	11	66	1339	55	0	1044	81
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	53	53	53	53	53
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.11	0.17	0.12	0.11	0.05	0.15	0.29	0.29	0.34	0.35
s, saturation flow rate [veh/h]	1144	1676	1344	977	1630	448	3192	1631	1676	1622
c, Capacity [veh/h]	361	521	418	225	507	238	1873	957	984	952
d1, Uniform Delay [s]	28.68	25.60	24.16	36.89	22.61	22.18	10.79	10.82	11.56	11.75
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.55	0.84	0.55	1.71	0.16	2.89	0.92	1.83	2.41	2.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.53	0.37	0.50	0.18	0.28	0.49	0.49	0.57	0.59
d, Delay for Lane Group [s/veh]	29.23	26.44	24.71	38.60	22.77	25.07	11.71	12.65	13.97	14.44
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.24	4.88	2.58	2.44	1.37	1.22	5.05	5.45	6.96	7.12
50th-Percentile Queue Length [ft]	55.94	122.07	64.43	60.91	34.34	30.54	126.29	136.33	173.94	177.95
95th-Percentile Queue Length [veh]	4.03	8.51	4.64	4.39	2.47	2.20	8.74	9.28	11.28	11.49
95th-Percentile Queue Length [ft]	100.69	212.66	115.98	109.64	61.81	54.97	218.44	232.07	282.09	287.34

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.23	26.44	24.71	38.60	22.77	22.77	25.07	12.01	12.65	0.00	14.19	14.44
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	26.57			31.59			12.62			14.21		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.61											
Intersection LOS	B											
Intersection V/C	0.512											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	41.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	110	810	80	170	1260	100	150	710	80	70	660	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	810	80	170	1260	100	150	710	80	70	660	60
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	214	21	51	379	30	43	206	23	20	186	17
Total Analysis Volume [veh/h]	116	856	85	205	1516	120	174	823	93	79	745	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	36	36	46	37	37	35	27	27	35	23	23
g / C, Green / Cycle	0.51	0.40	0.40	0.51	0.41	0.41	0.39	0.30	0.30	0.39	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.21	0.24	0.05	0.12	0.43	0.08	0.18	0.25	0.25	0.10	0.22	0.22
s, saturation flow rate [veh/h]	562	3547	1558	1643	3547	1563	982	1900	1790	819	1900	1806
c, Capacity [veh/h]	266	1401	615	832	1442	636	364	566	534	296	491	466
d1, Uniform Delay [s]	20.16	21.75	17.45	12.54	26.74	17.18	21.42	29.41	29.65	20.61	31.67	31.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.24	0.25	0.11	0.19	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.15	2.00	0.47	0.70	38.33	0.66	4.44	6.54	8.18	0.48	6.61	8.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.44	0.61	0.14	0.25	1.05	0.19	0.48	0.82	0.84	0.27	0.84	0.86
d, Delay for Lane Group [s/veh]	25.31	23.75	17.92	13.24	65.07	17.84	25.86	35.95	37.83	21.09	38.28	40.05
Lane Group LOS	C	C	B	B	F	B	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.57	7.29	1.18	2.38	22.19	1.67	2.81	9.95	9.90	1.07	9.16	9.13
50th-Percentile Queue Length [ft]	39.17	182.32	29.51	59.42	554.67	41.68	70.24	248.79	247.39	26.74	229.09	228.31
95th-Percentile Queue Length [veh]	2.82	11.72	2.12	4.28	30.99	3.00	5.06	15.13	15.05	1.93	14.13	14.09
95th-Percentile Queue Length [ft]	70.51	293.03	53.11	106.95	774.80	75.03	126.44	378.13	376.36	48.14	353.20	352.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.31	23.75	17.92	13.24	65.07	17.84	25.86	36.77	37.83	21.09	39.07	40.05
Movement LOS	C	C	B	B	F	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	23.45			56.22			35.12			37.55		
Approach LOS	C			E			D			D		
d_I, Intersection Delay [s/veh]	41.00											
Intersection LOS	D											
Intersection V/C	0.758											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	1000	90	0	840	80	110	1120	120	40	850	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1000	90	0	840	80	110	1120	120	40	850	50
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	283	25	0	234	22	30	303	32	13	275	16
Total Analysis Volume [veh/h]	79	1132	102	0	936	89	119	1211	130	52	1099	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	46	46	46	46	46	46
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.52	0.52	0.52	0.52	0.52	0.52
(v / s)_j Volume / Saturation Flow Rate	0.14	0.34	0.34	0.19	0.20	0.24	0.33	0.09	0.11	0.31	0.31
s, saturation flow rate [veh/h]	553	1863	1795	3547	1733	490	3618	1507	459	1900	1846
c, Capacity [veh/h]	201	712	686	1356	662	208	1865	777	189	979	952
d1, Uniform Delay [s]	32.04	25.84	25.99	21.27	21.39	32.37	15.88	11.56	29.51	15.29	15.36
k, delay calibration	0.11	0.27	0.28	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.25	8.53	9.67	0.29	0.62	10.89	1.77	0.47	3.57	2.71	2.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.88	0.89	0.50	0.52	0.57	0.65	0.17	0.28	0.60	0.61
d, Delay for Lane Group [s/veh]	33.29	34.37	35.66	21.56	22.02	43.26	17.65	12.03	33.08	18.01	18.22
Lane Group LOS	C	C	D	C	C	D	B	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.60	13.51	13.43	5.37	5.46	3.08	8.85	1.41	1.12	8.39	8.30
50th-Percentile Queue Length [ft]	40.12	337.65	335.76	134.35	136.60	76.89	221.26	35.31	28.07	209.63	207.45
95th-Percentile Queue Length [veh]	2.89	19.53	19.44	9.18	9.30	5.54	13.73	2.54	2.02	13.13	13.02
95th-Percentile Queue Length [ft]	72.22	488.33	486.01	229.40	232.44	138.41	343.24	63.55	50.52	328.35	325.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.29	34.95	35.66	0.00	21.69	22.02	43.26	17.65	12.03	33.08	18.11	18.22
Movement LOS	C	C	D		C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	34.90			21.71			19.24			18.75		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	23.73											
Intersection LOS	C											
Intersection V/C	0.674											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	58.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	160	1060	280	320	1220	150	170	1290	110	60	990	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	1060	280	320	1220	150	170	1290	110	60	990	100
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	301	80	86	328	40	45	339	29	18	290	29
Total Analysis Volume [veh/h]	182	1204	318	344	1311	161	179	1355	116	70	1161	117
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	52	12	41	59	9	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.43	0.10	0.34	0.49	0.07	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.10	0.24	0.20	0.10	0.26	0.11	0.10	0.37	0.08	0.04	0.32	0.08
s, saturation flow rate [veh/h]	1810	5074	1563	3445	5074	1499	1810	3618	1459	1774	3618	1499
c, Capacity [veh/h]	187	1628	731	356	1628	656	187	1220	723	130	1154	478
d1, Uniform Delay [s]	53.66	36.30	21.36	53.62	37.34	21.27	53.56	39.78	16.59	53.66	40.88	30.19
k, delay calibration	0.25	0.50	0.50	0.11	0.50	0.50	0.25	0.20	0.14	0.11	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	40.53	3.06	1.88	15.39	4.35	0.89	36.37	55.07	0.13	3.41	19.42	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

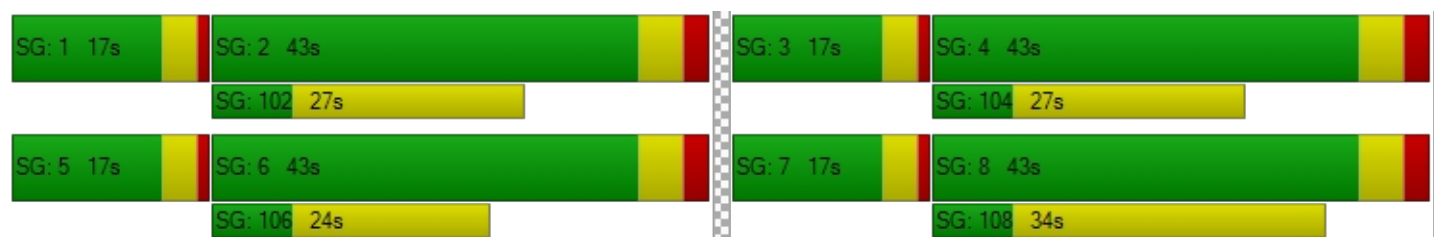
X, volume / capacity	0.97	0.74	0.44	0.97	0.81	0.25	0.96	1.11	0.16	0.54	1.01	0.24
d, Delay for Lane Group [s/veh]	94.19	39.36	23.25	69.01	41.69	22.16	89.93	94.85	16.72	57.07	60.30	30.76
Lane Group LOS	F	D	C	E	D	C	F	F	B	E	F	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	7.53	10.75	6.23	5.92	12.31	3.03	7.21	26.80	1.75	2.15	19.71	2.56
50th-Percentile Queue Length [ft]	188.17	268.65	155.81	148.08	307.68	75.68	180.28	670.09	43.80	53.71	492.76	63.99
95th-Percentile Queue Length [veh]	12.03	16.12	10.33	9.91	18.06	5.45	11.62	37.80	3.15	3.87	27.10	4.61
95th-Percentile Queue Length [ft]	300.65	403.05	258.17	247.86	451.51	136.22	290.38	944.97	78.84	96.68	677.43	115.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	94.19	39.36	23.25	69.01	41.69	22.16	89.93	94.85	16.72	57.07	60.30	30.76
Movement LOS	F	D	C	E	D	C	F	F	B	E	F	C
d_A, Approach Delay [s/veh]	42.21			45.13			88.83			57.57		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	58.00											
Intersection LOS	E											
Intersection V/C	0.779											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	47.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.820

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	980	380	720	1740
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	980	380	720	1740
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	273	106	191	461
Total Analysis Volume [veh/h]	0	0	1091	423	763	1845
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.34	0.30	0.48	0.58
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	13.34	12.51	29.72	0.29
k, delay calibration	0.50	0.50	0.36	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.58	2.57	191.33	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.53	1.41	0.61
d, Delay for Lane Group [s/veh]	14.92	15.08	221.05	1.22
Lane Group LOS	B	B	F	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.13	5.47	39.82	0.39
50th-Percentile Queue Length [ft]	178.36	136.75	995.52	9.72
95th-Percentile Queue Length [veh]	11.51	9.31	60.66	0.70
95th-Percentile Queue Length [ft]	287.87	232.65	1516.58	17.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	14.92	15.08	221.05	1.22
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		14.96		65.53	
Approach LOS	A		B		E	
d_I, Intersection Delay [s/veh]	46.96					
Intersection LOS	D					
Intersection V/C	0.820					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	115.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.861

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	120	1710	130	70	1120	70	120	400	110	100	460	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	1710	130	70	1120	70	120	400	110	100	460	110
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	504	38	19	308	19	32	105	29	27	125	30
Total Analysis Volume [veh/h]	141	2015	153	77	1232	77	126	421	116	109	501	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	114			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	41	0	15	56	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	52	52	52	29	29	29	29	29	29
g / C, Green / Cycle	0.42	0.42	0.42	0.57	0.57	0.57	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.35	0.63	0.11	0.15	0.39	0.06	0.18	0.13	0.09	0.13	0.19	0.20
s, saturation flow rate [veh/h]	405	3192	1407	498	3192	1351	705	3192	1328	846	1676	1482
c, Capacity [veh/h]	133	1354	597	318	1824	772	175	1044	434	253	548	484
d1, Uniform Delay [s]	42.85	26.05	16.82	18.07	13.53	8.81	40.64	23.61	22.46	32.86	25.34	25.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	95.22	223.55	1.04	1.80	2.03	0.26	5.54	0.25	0.33	1.16	0.99	1.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

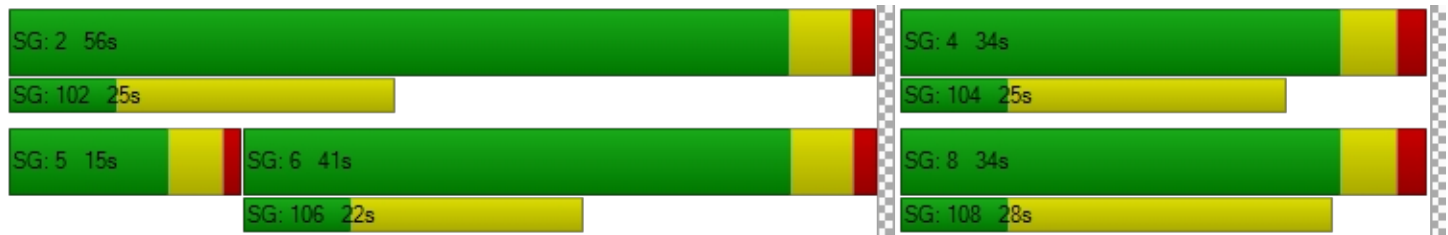
X, volume / capacity	1.06	1.49	0.26	0.24	0.68	0.10	0.72	0.40	0.27	0.43	0.58	0.62
d, Delay for Lane Group [s/veh]	138.07	249.59	17.86	19.87	15.56	9.07	46.18	23.86	22.78	34.02	26.33	27.01
Lane Group LOS	F	F	B	B	B	A	D	C	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.46	55.62	2.15	0.81	8.40	0.70	3.06	3.43	1.82	2.22	5.69	5.45
50th-Percentile Queue Length [ft]	161.61	1390.43	53.81	20.32	210.03	17.44	76.59	85.72	45.44	55.43	142.34	136.27
95th-Percentile Queue Length [veh]	11.01	85.50	3.87	1.46	13.15	1.26	5.51	6.17	3.27	3.99	9.61	9.28
95th-Percentile Queue Length [ft]	275.27	2137.43	96.87	36.58	328.87	31.38	137.86	154.30	81.79	99.77	240.17	231.99

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	138.07	249.59	17.86	19.87	15.56	9.07	46.18	23.86	22.78	34.02	26.58	27.01
Movement LOS	F	F	B	B	B	A	D	C	C	C	C	C
d_A, Approach Delay [s/veh]	227.43			15.44			27.91			27.76		
Approach LOS	F			B			C			C		
d_I, Intersection Delay [s/veh]	115.03											
Intersection LOS	F											
Intersection V/C	0.861											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	27.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	110	1070	100	80	960	110	70	490	100	70	460	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1070	100	80	960	110	70	490	100	70	460	40
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	296	28	21	246	28	21	150	31	20	129	11
Total Analysis Volume [veh/h]	122	1184	111	82	985	113	86	602	123	79	517	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.27	0.27	0.27	0.21	0.23	0.23	0.11	0.36	0.09	0.11	0.34
s, saturation flow rate [veh/h]	460	3192	1598	382	3192	1582	760	1676	1406	733	1651
c, Capacity [veh/h]	218	1583	792	178	1583	784	139	705	591	117	694
d1, Uniform Delay [s]	33.46	19.15	19.18	34.74	18.14	18.18	50.45	28.82	20.24	52.43	28.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.33	0.04	0.04	0.29
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.00	1.35	2.70	8.30	0.98	1.99	1.66	8.64	0.06	2.48	5.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

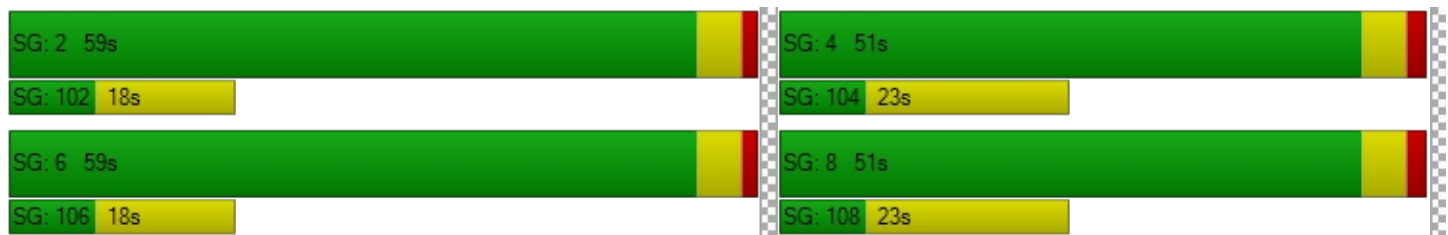
X, volume / capacity	0.56	0.54	0.55	0.46	0.46	0.47	0.62	0.85	0.21	0.67	0.81
d, Delay for Lane Group [s/veh]	43.46	20.50	21.88	43.04	19.12	20.17	52.11	37.46	20.30	54.91	33.95
Lane Group LOS	D	C	C	D	B	C	D	D	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	3.52	7.70	8.05	2.36	6.18	6.39	2.44	15.60	2.01	2.27	13.76
50th-Percentile Queue Length [ft]	88.04	192.51	201.16	58.98	154.38	159.85	61.10	389.91	50.14	56.67	343.96
95th-Percentile Queue Length [veh]	6.34	12.25	12.70	4.25	10.25	10.54	4.40	22.07	3.61	4.08	19.84
95th-Percentile Queue Length [ft]	158.46	306.28	317.46	106.17	256.27	263.53	109.98	551.83	90.25	102.01	496.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.46	20.88	21.88	43.04	19.39	20.17	52.11	37.46	20.30	54.91	33.95	33.95
Movement LOS	D	C	C	D	B	C	D	D	C	D	C	C
d_A, Approach Delay [s/veh]	22.90			21.11			36.41			36.53		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.24											
Intersection LOS	C											
Intersection V/C	0.630											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	146.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.976

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	700	940	30	340	30	320	1030	140	50	1480	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	700	940	30	340	30	320	1030	140	50	1480	170
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	179	241	8	94	8	87	279	38	13	389	45
Total Analysis Volume [veh/h]	41	717	963	33	377	33	347	1116	152	53	1557	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	46	38	50	46	35	35	67	59	59	67	55	65
g / C, Green / Cycle	0.38	0.32	0.41	0.38	0.29	0.29	0.56	0.49	0.49	0.56	0.46	0.54
(v / s)_j Volume / Saturation Flow Rate	0.04	0.26	0.77	0.04	0.11	0.11	0.69	0.38	0.38	0.09	0.55	0.11
s, saturation flow rate [veh/h]	1148	2800	1252	810	1863	1808	500	1500	1824	559	2856	1580
c, Capacity [veh/h]	441	896	523	222	543	528	210	737	896	260	1313	859
d1, Uniform Delay [s]	24.79	37.31	35.78	27.74	33.88	33.92	44.51	24.93	25.23	19.59	32.44	14.09
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.70	385.96	0.30	0.44	0.46	314.50	7.53	6.77	1.76	91.75	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

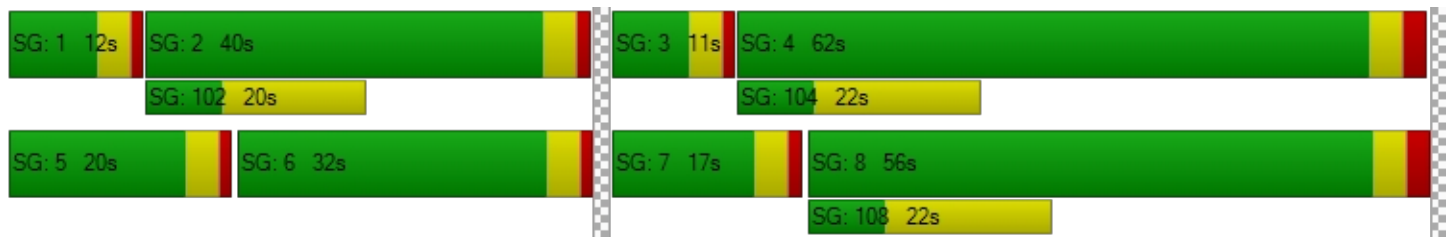
X, volume / capacity	0.09	0.80	1.84	0.15	0.38	0.38	1.65	0.77	0.78	0.20	1.19	0.21
d, Delay for Lane Group [s/veh]	24.88	39.01	421.74	28.04	34.32	34.38	359.00	32.46	32.01	21.35	124.19	14.64
Lane Group LOS	C	D	F	C	C	C	F	C	C	C	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.76	9.64	70.73	0.63	4.90	4.81	21.16	13.90	17.20	0.77	34.81	2.57
50th-Percentile Queue Length [ft]	19.03	241.01	1768.13	15.77	122.39	120.17	529.06	347.55	429.95	19.22	870.24	64.32
95th-Percentile Queue Length [veh]	1.37	14.73	113.56	1.14	8.52	8.40	37.32	20.02	24.00	1.38	50.14	4.63
95th-Percentile Queue Length [ft]	34.25	368.31	2839.08	28.38	213.10	210.06	933.08	500.42	599.98	34.59	1253.61	115.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.88	39.01	421.74	28.04	34.35	34.38	359.00	32.24	32.01	21.35	124.19	14.64
Movement LOS	C	D	F	C	C	C	F	C	C	C	F	B
d_A, Approach Delay [s/veh]	252.83			33.88			102.42			110.19		
Approach LOS	F			C			F			F		
d_I, Intersection Delay [s/veh]	145.95											
Intersection LOS	F											
Intersection V/C	0.976											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	280	70	60	90	40	10	850	80	70	780	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	280	70	60	90	40	10	850	80	70	780	20
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	77	19	18	27	12	3	226	21	22	242	6
Total Analysis Volume [veh/h]	33	310	77	72	108	48	11	905	85	87	966	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	54	54	54	54
g / C, Green / Cycle	0.29	0.29	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.28	0.31	0.32	0.32	0.43	0.43
s, saturation flow rate [veh/h]	1517	745	1649	1467	974	1513
c, Capacity [veh/h]	487	271	1039	887	638	915
d1, Uniform Delay [s]	30.69	30.16	10.21	10.33	13.33	12.35
k, delay calibration	0.31	0.38	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.13	20.68	1.78	2.29	5.36	4.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.86	0.84	0.51	0.53	0.66	0.72
d, Delay for Lane Group [s/veh]	42.82	50.84	11.99	12.62	18.69	17.14
Lane Group LOS	D	D	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	10.17	6.39	5.71	5.28	6.95	9.03
50th-Percentile Queue Length [ft]	254.36	159.75	142.86	132.04	173.79	225.75
95th-Percentile Queue Length [veh]	15.41	10.54	9.63	9.05	11.28	13.96
95th-Percentile Queue Length [ft]	385.14	263.40	240.87	226.26	281.89	348.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.82	42.82	42.82	50.84	50.84	50.84	11.99	12.26	12.62	18.69	17.68	17.14
Movement LOS	D	D	D	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	42.82			50.84			12.29			17.75		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	22.37											
Intersection LOS	C											
Intersection V/C	0.740											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	64.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	870	570	0	30	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	870	570	0	30	40
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	250	164	0	11	14
Total Analysis Volume [veh/h]	0	1001	656	0	42	56
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.42	0.13
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	64.11	14.47
Movement LOS		A	A		F	B
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	1.73	0.44
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	43.33	10.95
d_A, Approach Delay [s/veh]	0.00		0.00		35.74	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	2.00					
Intersection LOS	F					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	50.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.924

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↖ ↗	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	440	450	0	290	250
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	440	450	0	290	250
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	124	128	0	97	83
Total Analysis Volume [veh/h]	0	495	511	0	387	333
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.92	0.44	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	50.10	10.51	0.00	0.00	0.00
Movement LOS		F	B		A	A
95th-Percentile Queue Length [veh]	0.00	11.31	2.29	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	282.63	57.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	50.10		10.51		0.00	
Approach LOS	F		B		A	
d_I, Intersection Delay [s/veh]	17.48					
Intersection LOS	F					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.821

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	50	450	10	10	280	10	0	0	0	20	10	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	450	10	10	280	10	0	0	0	20	10	30
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	143	3	3	79	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	63	571	13	11	317	11	0	0	0	27	13	40
Pedestrian Volume [ped/h]	35			23			5			6		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	788	740	566	612
Degree of Utilization, x	0.82	0.46	0.00	0.13

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	9.07	2.42	0.00	0.45
95th-Percentile Queue Length [ft]	226.83	60.50	0.00	11.20
Approach Delay [s/veh]	24.79	11.91	0.00	9.76
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	19.57			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	40	410	10	0	250	10	10	10	10	10	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	410	10	0	250	10	10	10	10	10	0	20
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	0.7143
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	118	3	0	80	3	4	4	4	4	0	7
Total Analysis Volume [veh/h]	46	473	12	0	321	13	18	18	18	14	0	28
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	784	753	616	635
Degree of Utilization, x	0.68	0.44	0.09	0.07

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	5.39	2.29	0.29	0.21
95th-Percentile Queue Length [ft]	134.68	57.21	7.17	5.30
Approach Delay [s/veh]	16.68	11.52	9.40	9.07
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	14.15			
Intersection LOS	B			



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** San Vicente Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↶ Left	90	1	90	120	1	120
	↶↷ Left-Through		0			0	
	→ Through	150	1	150	340	1	340
	↷ Through-Right		0			0	
	↷ Right	120	1	50	150	1	80
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>SOUTHBOUND</b>	↷ Left	290	1	290	220	1	220
	↷↶ Left-Through		0			0	
	→ Through	250	1	250	260	1	260
	↷ Through-Right		0			0	
	↷ Right	150	1	100	120	1	75
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>EASTBOUND</b>	↶ Left	100	1	100	90	1	90
	↶↷ Left-Through		0			0	
	→ Through	860	2	430	710	2	355
	↷ Through-Right		0			0	
	↷ Right	90	1	45	70	1	10
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>WESTBOUND</b>	↶ Left	140	1	140	140	1	140
	↶↷ Left-Through		0			0	
	→ Through	830	2	415	780	2	390
	↷ Through-Right		0			0	
	↷ Right	180	1	35	280	1	170
	↷↶ Left-Through-Right		0			0	
	↷↶ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 440			<i>North-South:</i> 600
				<i>East-West:</i> 570			<i>East-West:</i> 495
				<b>SUM:</b> 1010			<b>SUM:</b> 1095
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.735			0.796
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.635</b>			<b>0.696</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2			2
				0			0
		<b>NB--</b> 0	<b>SB--</b> 0	0	<b>NB--</b> 0	<b>SB--</b> 0	0
		<b>EB--</b> 2	<b>WB--</b> 2	2	<b>EB--</b> 2	<b>WB--</b> 2	2
				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	20	0	20	20	0	20
	↵↔ Left-Through		1			1	
	→ Through	110	0	130	90	0	110
	↘ Through-Right		0			0	
	↘ Right	10	1	0	30	1	15
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	180	0	180	100	0	100
	↵↔ Left-Through		1			1	
	→ Through	80	0	260	110	0	210
	↘ Through-Right		0			0	
	↘ Right	20	1	5	50	1	25
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	1100	1	555	1250	1	630
	↘ Through-Right		1			1	
	↘ Right	10	0	10	10	0	10
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	30	1	30	30	1	30
	↵↔ Left-Through		0			0	
	→ Through	1360	1	715	1330	1	710
	↘ Through-Right		1			1	
	↘ Right	70	0	70	90	0	90
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 310			<i>North-South:</i> 230
				<i>East-West:</i> 745			<i>East-West:</i> 760
				<b>SUM:</b> 1055			<b>SUM:</b> 990
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.703			0.660
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.603</b>			<b>0.560</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	160	1	160	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	120	1	120	100	1	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1170	1	645	1430	1	765
	↘ Through-Right		1			1	
	↘ Right	120	0	120	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1370	2	685	1360	2	680
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 160			<i>North-South:</i> 240
				<i>East-West:</i> 715			<i>East-West:</i> 845
				<i>SUM:</i> 875			<i>SUM:</i> 1085
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.583			0.723
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.483</b>			<b>0.623</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	100	0	100	80	0	80
	↵↔ Left-Through		0			0	
	→ Through	290	0	440	400	0	560
	↘ Through-Right		0			0	
	↘ Right	50	0	0	80	0	0
	↘↔ Left-Through-Right			1		1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	0	30	40	0	40
	↵↔ Left-Through		0			0	
	→ Through	210	0	290	270	0	360
	↘ Through-Right		0			0	
	↘ Right	50	0	0	50	0	0
	↘↔ Left-Through-Right			1		1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	20	1	20
	↵↔ Left-Through		0			0	
	→ Through	710	1	395	1000	1	535
	↘ Through-Right		1			1	
	↘ Right	80	0	80	70	0	70
	↘↔ Left-Through-Right			0		0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	80	1	80	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	1270	1	660	1000	1	520
	↘ Through-Right		1			1	
	↘ Right	50	0	50	40	0	40
	↘↔ Left-Through-Right			0		0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 470			<i>North-South:</i> 600
				<i>East-West:</i> 680			<i>East-West:</i> 575
				<b>SUM:</b> 1150			<b>SUM:</b> 1175
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.767			0.783
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.667</b>			<b>0.683</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Broadway

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	70	0	70
	Left-Through		0			0	
	Through	390	0	510	490	0	620
	Through-Right		0			0	
	Right	50	0	0	60	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	10	0	10	20	0	20
	Left-Through		0			0	
	Through	360	0	390	370	0	410
	Through-Right		0			0	
	Right	20	0	0	20	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	30	1	30
	Left-Through		0			0	
	Through	180	0	300	350	0	440
	Through-Right		1			1	
	Right	120	0	0	90	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	40	1	40	30	1	30
	Left-Through		0			0	
	Through	200	1	200	130	1	130
	Through-Right		0			0	
	Right	20	1	20	30	1	30
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 520			<i>North-South:</i> 640
				<i>East-West:</i> 340			<i>East-West:</i> 470
				<i>SUM:</i> 860			<i>SUM:</i> 1110
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.573			0.740
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.473</b>			<b>0.640</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	560	2	308	760	2	418
	↵↔ Left-Through		0			0	
	→ Through	10	0	70	10	0	120
	↵↔ Through-Right		1			1	
	↵ Right	60	0	0	110	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1030	1	520	1210	1	610
	↵↔ Through-Right		1			1	
	↵ Right	10	0	10	10	0	10
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	10	1	10	10	1	10
	↵↔ Left-Through		0			0	
	→ Through	1530	2	765	1390	2	695
	↵↔ Through-Right		0			0	
	↵ Right	690	1	382	670	1	252
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 308			<i>North-South:</i> 418
				<i>East-West:</i> 795			<i>East-West:</i> 755
				<i>SUM:</i> 1103			<i>SUM:</i> 1173
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.735			0.782
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.635</b>			<b>0.682</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	760	1	480	500	1	330
	↵↘ Left-Through		0			0	
	→ Through	0	0	480	0	0	330
	↘ Through-Right		0			0	
	↘ Right	200	0	0	160	0	0
	↘↵ Left-Through-Right			1		1	
	↘↵ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↘ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↵ Left-Through-Right			1		1	
	↘↵ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↘ Left-Through		0			0	
	→ Through	1250	3	417	1400	3	467
	↘ Through-Right		0			0	
	↘ Right	310	1	0	580	1	250
	↘↵ Left-Through-Right			0		0	
	↘↵ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	150	1	150	60	1	60
	↵↘ Left-Through		0			0	
	→ Through	1450	2	483	1560	2	520
	↘ Through-Right		1			1	
	↘ Right	0	0	0	0	0	0
	↘↵ Left-Through-Right			0		0	
	↘↵ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 480			<i>North-South:</i> 330
				<i>East-West:</i> 567			<i>East-West:</i> 527
				<i>SUM:</i> 1047			<i>SUM:</i> 857
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.735			0.601
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.635</b>			<b>0.501</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 2	<b>SB--</b> 2	2	<b>NB--</b> 2	<b>SB--</b> 2	2
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 0	0	<b>EB--</b> 3	<b>WB--</b> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	410	1	410	410	1	410
	Left-Through		0			0	
	Through	530	1	530	240	1	240
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	340	1	340	620	1	620
	Through-Right		0			0	
	Right	80	1	80	80	1	80
	Left-Through-Right		0			0	
<b>EASTBOUND</b>	Left	600	1	600	330	1	330
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	340	1	0	290	1	0
	Left-Through-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>CRITICAL VOLUMES</b>				North-South: 750			North-South: 1030
				East-West: 600			East-West: 330
				SUM: 1350			SUM: 1360
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.947			0.954
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.847			0.854
<b>LEVEL OF SERVICE (LOS):</b>				D			D



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Texas Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	0	70	10	0	10
	↵↔ Left-Through		1		1		
	→ Through	850	0	575	850	0	485
	↗ Through-Right		1		1		
	↘ Right	20	0	575	80	0	485
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	20	0	20	70	0	70
	↵↔ Left-Through		1		1		
	→ Through	760	0	425	780	0	540
	↗ Through-Right		1		1		
	↘ Right	10	0	425	20	0	540
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	0	30	30	0	30
	↵↔ Left-Through		0			0	
	→ Through	100	0	210	280	0	380
	↗ Through-Right		0			0	
	↘ Right	80	0	0	70	0	0
	↗↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	80	0	80	60	0	60
	↵↔ Left-Through		0			0	
	→ Through	110	0	240	90	0	190
	↗ Through-Right		0			0	
	↘ Right	50	0	0	40	0	0
	↗↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		595	<i>North-South:</i>		555
		<i>East-West:</i>		290	<i>East-West:</i>		440
		<b>SUM:</b>		885	<b>SUM:</b>		995
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.590			0.663
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.490</b>			<b>0.563</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



# Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	190	1	190	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	640	1	385	710	1	395
	↗ Through-Right		1			1	
	↘ Right	130	0	130	80	0	80
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	650	1	370	660	1	360
	↗ Through-Right		1			1	
	↘ Right	90	0	90	60	0	60
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	1290	2	645	810	2	405
	↗ Through-Right		0			0	
	↘ Right	80	1	0	80	1	5
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	130	1	130	170	1	170
	↵↔ Left-Through		0			0	
	→ Through	1410	2	705	1260	2	630
	↗ Through-Right		0			0	
	↘ Right	80	1	25	100	1	65
	↗↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 560			<i>North-South:</i> 510
				<i>East-West:</i> 775			<i>East-West:</i> 740
				<i>SUM:</i> 1335			<i>SUM:</i> 1250
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.971			0.909
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.871</b>			<b>0.809</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	1	70	110	1	110
	Left-Through		0			0	
	Through	920	2	460	1120	2	560
	Through-Right		0			0	
	Right	70	1	70	120	1	120
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	60	1	60	40	1	40
	Left-Through		0			0	
	Through	900	1	470	850	1	450
	Through-Right		1			1	
	Right	40	0	40	50	0	50
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	50	1	50	70	1	70
	Left-Through		0			0	
	Through	660	1	400	1000	1	545
	Through-Right		1			1	
	Right	140	0	140	90	0	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	1010	2	367	840	2	307
	Through-Right		1			1	
	Right	90	0	90	80	0	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 540			<i>North-South:</i> 600
				<i>East-West:</i> 417			<i>East-West:</i> 545
				<i>SUM:</i> 957			<i>SUM:</i> 1145
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.638			0.763
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.538</b>			<b>0.663</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	1	70	60	1	60
	Left-Through		0			0	
	Through	1000	2	353	1210	2	420
	Through-Right		1			1	
	Right	60	0	60	50	0	50
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	1030	1	555	900	1	485
	Through-Right		1			1	
	Right	80	0	80	70	0	70
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	50	1	50	110	1	110
	Left-Through		0			0	
	Through	180	0	280	250	0	390
	Through-Right		1			1	
	Right	100	0	0	140	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	170	1	170	100	1	100
	Left-Through		0			0	
	Through	220	1	220	70	1	70
	Through-Right		0			0	
	Right	10	1	10	10	1	10
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		625	<i>North-South:</i>		545
		<i>East-West:</i>		450	<i>East-West:</i>		490
		<i>SUM:</i>		1075	<i>SUM:</i>		1035
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.717			0.690
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.617</b>			<b>0.590</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
				4			4
No. of Phases				0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		3	3	3	3	3	3
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	320	1	320	170	1	170
	Left-Through		0		0	0	
	Through	1210	2	605	1290	2	645
	Through-Right		0		0	0	
	Right	230	1	114	110	1	0
	Left-Through-Right		0		0	0	
<b>SOUTHBOUND</b>	Left	140	1	140	60	1	60
	Left-Through		0		0	0	
	Through	1020	2	510	990	2	495
	Through-Right		0		0	0	
	Right	160	1	0	100	1	0
	Left-Through-Right		0		0	0	
<b>EASTBOUND</b>	Left	170	1	170	160	1	160
	Left-Through		0		0	0	
	Through	870	3	290	1060	3	353
	Through-Right		0		0	0	
	Right	110	1	0	280	1	110
	Left-Through-Right		0		0	0	
<b>WESTBOUND</b>	Left	210	2	116	320	2	176
	Left-Through		0		0	0	
	Through	1240	3	413	1220	3	407
	Through-Right		0		0	0	
	Right	110	1	0	150	1	90
	Left-Through-Right		0		0	0	
<b>CRITICAL VOLUMES</b>				830			705
				583			567
				1413			1272
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.028			0.925
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.928			0.825
<b>LEVEL OF SERVICE (LOS):</b>				E			D





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Ocean Park Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 3	<b>SB--</b> 0	0	<b>NB--</b> 3	<b>SB--</b> 0	0
		<b>EB--</b> 0	<b>WB--</b> 3	3	<b>EB--</b> 0	<b>WB--</b> 3	3
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	850	1	850	320	1	320
	Left-Through		0		0	0	
	Through	1650	1	850	1030	1	585
	Through-Right		1		1	1	
	Right	50	0	50	140	0	140
	Left-Through-Right		0		0	0	
	Left-Right		0		0	0	
<b>SOUTHBOUND</b>	Left	30	1	30	50	1	50
	Left-Through		0		0	0	
	Through	770	2	385	1480	2	740
	Through-Right		0		0	0	
	Right	270	1	250	170	1	150
	Left-Through-Right		0		0	0	
	Left-Right		0		0	0	
<b>EASTBOUND</b>	Left	40	1	40	40	1	40
	Left-Through		0		0	0	
	Through	330	2	165	700	2	350
	Through-Right		0		0	0	
	Right	250	1	0	940	1	780
	Left-Through-Right		0		0	0	
	Left-Right		0		0	0	
<b>WESTBOUND</b>	Left	50	1	50	30	1	30
	Left-Through		0		0	0	
	Through	450	1	255	340	1	185
	Through-Right		1		1	1	
	Right	60	0	60	30	0	30
	Left-Through-Right		0		0	0	
	Left-Right		0		0	0	
<b>CRITICAL VOLUMES</b>		<b>North-South:</b>		1235	<b>North-South:</b>		1060
		<b>East-West:</b>		295	<b>East-West:</b>		810
		<b>SUM:</b>		1530	<b>SUM:</b>		1870
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.113			1.360
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				1.013			1.260
<b>LEVEL OF SERVICE (LOS):</b>				F			F



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** I-10 EB On-Ramp

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2 0 0 0 2 0			2 0 0 0 2 0
		<b>NB--</b> 2 <b>EB--</b> 0	<b>SB--</b> 0 <b>WB--</b> 0		<b>NB--</b> 2 <b>EB--</b> 0	<b>SB--</b> 0 <b>WB--</b> 0	
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	2010	2	1005	980	2	490
	Through-Right		0			0	
	Right	860	1	860	380	1	380
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	680	1	680	720	1	720
	Left-Through		0			0	
	Through	1630	2	815	1740	2	870
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1685 <i>East-West:</i> 0 <i>SUM:</i> 1685			<i>North-South:</i> 1210 <i>East-West:</i> 0 <i>SUM:</i> 1210
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.123			0.807
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>1.023</b>			<b>0.707</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>F</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
ATSAC-1 or ATSAC+ATCS-2?		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	180	1	180	120	1	120
	↵↔ Left-Through		0			0	
	→ Through	370	2	185	400	2	200
	↵↔ Through-Right		0			0	
	↵ Right	70	1	40	110	1	75
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	90	1	90	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	320	1	225	460	1	285
	↵↔ Through-Right		1			1	
	↵ Right	130	0	130	110	0	110
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	80	1	80	120	1	120
	↵↔ Left-Through		0			0	
	→ Through	1670	2	835	1710	2	855
	↵↔ Through-Right		0			0	
	↵ Right	70	1	0	130	1	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	60	1	60	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	1530	2	765	1120	2	560
	↵↔ Through-Right		0			0	
	↵ Right	60	1	15	70	1	20
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 405			<i>North-South:</i> 405
				<i>East-West:</i> 895			<i>East-West:</i> 925
				<i>SUM:</i> 1300			<i>SUM:</i> 1330
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.912			0.933
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.812</b>			<b>0.833</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Future Year  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	100	1	100	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	520	1	520	490	1	490
	↘ Through-Right		0			0	
	↘ Right	90	1	35	100	1	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	480	0	550	460	0	500
	↘ Through-Right		1			1	
	↘ Right	70	0	0	40	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	80	1	80	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	920	2	330	1070	2	390
	↘ Through-Right		1			1	
	↘ Right	70	0	70	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	110	1	110	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1220	2	427	960	2	357
	↘ Through-Right		1			1	
	↘ Right	60	0	60	110	0	110
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		650	<i>North-South:</i>		570
		<i>East-West:</i>		507	<i>East-West:</i>		470
		<b>SUM:</b>		1157	<b>SUM:</b>		1040
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.771			0.693
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.671</b>			<b>0.593</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>

**APPENDIX C:  
STUDY INTERSECTION LEVEL OF SERVICE WORKSHEETS**

**FUTURE (2042) PLUS PROJECT CONDITIONS**



**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔↔			↔↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	62	381	30	71	50	196	400	60	20	390	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	62	381	30	71	50	196	400	60	20	390	110
Peak Hour Factor	0.9212	0.9212	0.9212	0.9306	0.9306	0.9306	0.8902	0.8902	0.8902	0.9204	0.9204	0.9204
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	17	103	8	19	13	55	112	17	5	106	30
Total Analysis Volume [veh/h]	43	67	414	32	76	54	220	449	67	22	424	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	125			47			44			9		
Bicycle Volume [bicycles/h]	44			16			17			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	32.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3						8			
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	58	27	27	31	50	50	3	23	23
g / C, Green / Cycle	0.30	0.64	0.30	0.30	0.34	0.56	0.56	0.03	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.50	0.27	0.33	0.04	0.12	0.24	0.04	0.01	0.22	0.10
s, saturation flow rate [veh/h]	221	1540	331	1528	1810	1900	1499	1643	1900	1183
c, Capacity [veh/h]	123	993	152	463	618	1067	842	54	481	299
d1, Uniform Delay [s]	29.63	7.77	26.00	22.65	22.20	11.32	9.05	42.66	32.33	27.95
k, delay calibration	0.50	0.26	0.41	0.04	0.50	0.50	0.50	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	57.25	0.68	20.41	0.04	1.60	1.22	0.18	1.82	6.76	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.90	0.42	0.71	0.12	0.36	0.42	0.08	0.41	0.88	0.40
d, Delay for Lane Group [s/veh]	86.88	8.45	46.41	22.70	23.80	12.54	9.23	44.48	39.09	28.27
Lane Group LOS	F	A	D	C	C	B	A	D	D	C
Critical Lane Group	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.41	3.71	2.50	0.81	3.68	5.12	0.61	0.50	9.52	2.14
50th-Percentile Queue Length [ft]	110.19	92.77	62.49	20.14	91.96	127.92	15.26	12.55	238.04	53.39
95th-Percentile Queue Length [veh]	7.85	6.68	4.50	1.45	6.62	8.83	1.10	0.90	14.58	3.84
95th-Percentile Queue Length [ft]	196.26	166.99	112.49	36.25	165.53	220.67	27.47	22.60	364.56	96.11

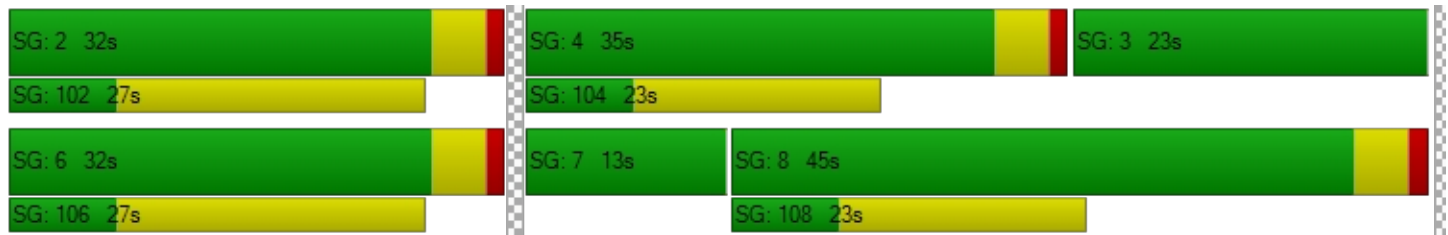


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	86.88	86.88	8.45	46.41	46.41	22.70	23.80	12.54	9.23	44.48	39.09	28.27
Movement LOS	F	F	A	D	D	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	24.91			38.50			15.60			37.00		
Approach LOS	C			D			B			D		
d_I, Intersection Delay [s/veh]	26.02											
Intersection LOS	C											
Intersection V/C	0.902											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.430

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	20	621	150	200	646	30	130	310	260	70	350	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	621	150	200	646	30	130	310	260	70	350	50
Peak Hour Factor	0.9492	0.9492	0.9492	0.9800	0.9800	0.9800	0.9348	0.9348	0.9348	0.9286	0.9286	0.9286
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	164	40	51	165	8	35	83	70	19	94	13
Total Analysis Volume [veh/h]	21	654	158	204	659	31	139	332	278	75	377	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			39			80			59		
Bicycle Volume [bicycles/h]	3			6			6			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	13	20	13	17	37	37	13	53	17	40	40	40
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	45	45	45	36	36	36	24	24	24
g / C, Green / Cycle	0.37	0.37	0.37	0.50	0.50	0.50	0.40	0.40	0.40	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.03	0.18	0.11	0.20	0.18	0.02	0.12	0.17	0.18	0.07	0.12	0.12
s, saturation flow rate [veh/h]	771	3618	1489	1023	3618	1483	1194	1900	1544	1047	1900	1796
c, Capacity [veh/h]	264	1324	545	527	1818	745	492	751	610	198	510	482
d1, Uniform Delay [s]	26.88	22.10	20.25	13.67	13.63	11.38	18.40	19.95	20.08	38.22	27.24	27.32
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.13	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	1.32	1.34	2.14	0.56	0.10	0.37	0.15	0.20	0.45	0.21	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

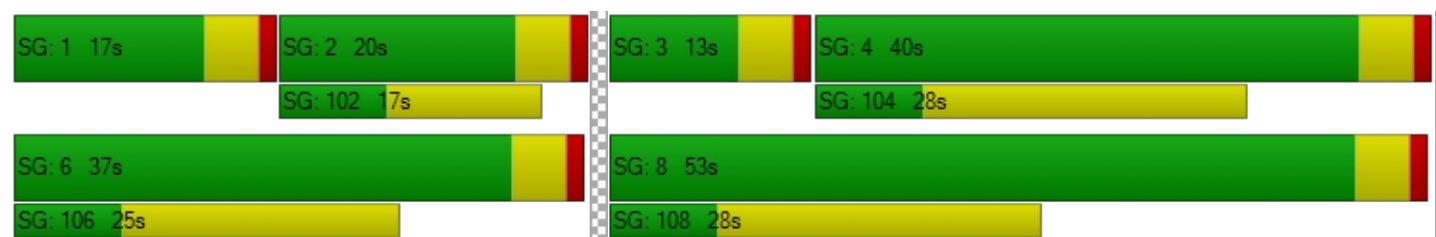
X, volume / capacity	0.08	0.49	0.29	0.39	0.36	0.04	0.28	0.44	0.46	0.38	0.43	0.44
d, Delay for Lane Group [s/veh]	27.47	23.42	21.60	15.81	14.19	11.49	18.77	20.10	20.28	38.67	27.45	27.55
Lane Group LOS	C	C	C	B	B	B	B	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.39	5.42	2.50	2.46	3.90	0.32	1.89	4.96	4.18	1.57	3.79	3.68
50th-Percentile Queue Length [ft]	9.81	135.56	62.42	61.46	97.51	7.93	47.34	123.91	104.60	39.17	94.79	91.94
95th-Percentile Queue Length [veh]	0.71	9.24	4.49	4.42	7.02	0.57	3.41	8.61	7.53	2.82	6.82	6.62
95th-Percentile Queue Length [ft]	17.66	231.04	112.36	110.62	175.52	14.27	85.21	215.19	188.29	70.50	170.62	165.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.47	23.42	21.60	15.81	14.19	11.49	18.77	20.10	20.28	38.67	27.49	27.55
Movement LOS	C	C	C	B	B	B	B	C	C	D	C	C
d_A, Approach Delay [s/veh]	23.17			14.47			19.92			29.15		
Approach LOS	C			B			B			C		
d_I, Intersection Delay [s/veh]	20.76											
Intersection LOS	C											
Intersection V/C	0.430											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.313

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	86	60	30	89	30	80	700	70	10	710	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	86	60	30	89	30	80	700	70	10	710	10
Peak Hour Factor	0.8413	0.8413	0.8413	0.7885	0.7885	0.7885	0.9587	0.9587	0.9587	0.9347	0.9347	0.9347
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	26	18	10	28	10	21	183	18	3	190	3
Total Analysis Volume [veh/h]	12	102	71	38	113	38	83	730	73	11	760	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			117			67			148		
Bicycle Volume [bicycles/h]	0			8			16			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	12	38	38	12	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	52	52	58	47	47
g / C, Green / Cycle	0.25	0.25	0.25	0.25	0.64	0.57	0.57	0.64	0.53	0.53
(v / s)_j Volume / Saturation Flow Rate	0.06	0.05	0.03	0.09	0.09	0.21	0.22	0.01	0.20	0.20
s, saturation flow rate [veh/h]	1840	1487	1235	1706	876	1900	1784	773	1900	1884
c, Capacity [veh/h]	510	376	309	432	594	1090	1024	529	997	989
d1, Uniform Delay [s]	26.72	26.38	30.81	27.55	6.78	10.40	10.49	6.48	12.74	12.76
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	0.09	0.07	0.18	0.04	0.98	1.10	0.07	1.14	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.22	0.19	0.12	0.35	0.14	0.37	0.39	0.02	0.39	0.39
d, Delay for Lane Group [s/veh]	26.80	26.47	30.88	27.73	6.82	11.38	11.59	6.55	13.88	13.91
Lane Group LOS	C	C	C	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.90	1.17	0.68	2.60	0.53	4.33	4.25	0.08	4.67	4.66
50th-Percentile Queue Length [ft]	47.47	29.24	17.05	64.98	13.21	108.19	106.26	1.93	116.86	116.47
95th-Percentile Queue Length [veh]	3.42	2.11	1.23	4.68	0.95	7.74	7.63	0.14	8.22	8.20
95th-Percentile Queue Length [ft]	85.44	52.63	30.68	116.97	23.78	193.48	190.78	3.47	205.50	204.97

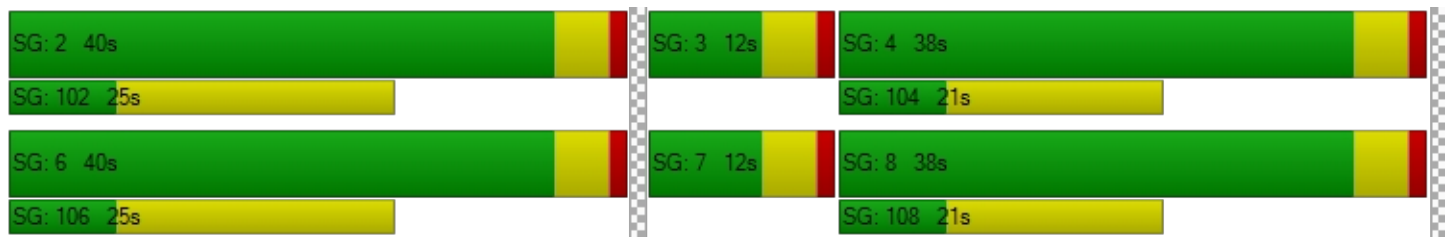


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.80	26.80	26.47	30.88	27.73	27.73	6.82	11.48	11.59	6.55	13.89	13.91
Movement LOS	C	C	C	C	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	26.67			28.37			11.05			13.79		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.12											
Intersection LOS	B											
Intersection V/C	0.313											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	23.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	317	70	123	304	40	110	760	175	90	620	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	317	70	123	304	40	110	760	175	90	620	10
Peak Hour Factor	0.8646	0.8646	0.8646	0.8917	0.8917	0.8917	0.9585	0.9585	0.9585	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	92	20	34	85	11	29	198	46	25	169	3
Total Analysis Volume [veh/h]	12	367	81	138	341	45	115	793	183	98	678	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			67			65			65		
Bicycle Volume [bicycles/h]	3			2			5			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	27	27	27	14	41	41	12	37	37	12	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	31	31	31	50	39	39	50	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.34	0.34	0.34	0.56	0.44	0.44	0.56	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.01	0.12	0.13	0.11	0.18	0.03	0.12	0.27	0.27	0.12	0.18	0.18
s, saturation flow rate [veh/h]	1024	1900	1702	1220	1900	1503	957	1900	1732	806	1900	1886
c, Capacity [veh/h]	128	404	362	424	645	510	557	828	754	443	825	819
d1, Uniform Delay [s]	41.44	31.79	32.08	21.99	23.97	20.28	10.23	19.54	19.74	11.83	17.63	17.64
k, delay calibration	0.04	0.04	0.04	0.11	0.04	0.04	0.15	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.12	0.47	0.61	0.46	0.25	0.03	0.25	3.32	3.90	1.15	1.56	1.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

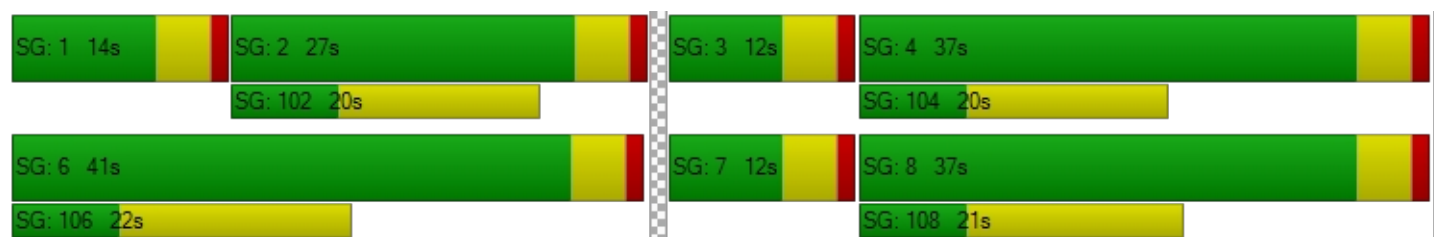
X, volume / capacity	0.09	0.57	0.61	0.33	0.53	0.09	0.21	0.61	0.63	0.22	0.42	0.42
d, Delay for Lane Group [s/veh]	41.56	32.26	32.69	22.46	24.22	20.30	10.48	22.86	23.64	12.98	19.19	19.22
Lane Group LOS	D	C	C	C	C	C	B	C	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.26	4.43	4.28	2.09	5.71	0.64	1.04	8.47	8.11	0.99	5.12	5.10
50th-Percentile Queue Length [ft]	6.46	110.78	107.02	52.27	142.75	15.91	26.05	211.83	202.84	24.71	128.09	127.52
95th-Percentile Queue Length [veh]	0.47	7.88	7.67	3.76	9.63	1.15	1.88	13.25	12.79	1.78	8.84	8.80
95th-Percentile Queue Length [ft]	11.63	197.08	191.85	94.09	240.72	28.63	46.89	331.17	319.63	44.48	220.90	220.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.56	32.42	32.69	22.46	24.22	20.30	10.48	23.14	23.64	12.98	19.20	19.22
Movement LOS	D	C	C	C	C	C	B	C	C	B	B	B
d_A, Approach Delay [s/veh]	32.71			23.42			21.89			18.43		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	22.96											
Intersection LOS	C											
Intersection V/C	0.489											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	70	300	100	110	250	50	110	945	140	30	743	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	300	100	110	250	50	110	945	140	30	743	60
Peak Hour Factor	0.9879	0.9879	0.9879	0.9038	0.9038	0.9038	0.9399	0.9399	0.9399	0.9077	0.9077	0.9077
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	76	25	30	69	14	29	251	37	8	205	17
Total Analysis Volume [veh/h]	71	304	101	122	277	55	117	1005	149	33	819	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			63			82			86		
Bicycle Volume [bicycles/h]	6			3			34			41		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	41.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	28	35	28	12	47	43	15	43	35	47	28	47
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22	7	34	34	7	46	46	34	34	34
g / C, Green / Cycle	0.25	0.25	0.25	0.08	0.38	0.38	0.08	0.51	0.51	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.07	0.07	0.15	0.04	0.06	0.31	0.32	0.07	0.24	0.24
s, saturation flow rate [veh/h]	1065	1900	1432	1810	1900	1486	1810	1900	1756	495	1900	1825
c, Capacity [veh/h]	209	473	357	149	727	569	149	979	905	144	725	697
d1, Uniform Delay [s]	37.29	30.22	27.31	40.64	20.09	17.82	40.55	15.34	15.61	36.59	22.52	22.62
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.36	0.55	0.16	4.12	0.12	0.03	3.45	2.74	3.25	3.69	3.92	4.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.64	0.28	0.82	0.38	0.10	0.79	0.60	0.62	0.23	0.62	0.63
d, Delay for Lane Group [s/veh]	37.65	30.77	27.47	44.76	20.21	17.84	43.99	18.08	18.86	40.28	26.44	26.85
Lane Group LOS	D	C	C	D	C	B	D	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	1.46	5.74	1.72	2.77	4.02	0.71	2.65	8.64	8.52	0.82	8.17	8.04
50th-Percentile Queue Length [ft]	36.40	143.46	42.93	69.15	100.50	17.70	66.33	215.90	213.06	20.39	204.25	200.98
95th-Percentile Queue Length [veh]	2.62	9.67	3.09	4.98	7.24	1.27	4.78	13.46	13.31	1.47	12.86	12.69
95th-Percentile Queue Length [ft]	65.52	241.68	77.28	124.46	180.90	31.86	119.40	336.39	332.75	36.70	321.44	317.23



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.65	30.77	27.47	44.76	20.21	17.84	43.99	18.40	18.86	40.28	26.63	26.85
Movement LOS	D	C	C	D	C	B	D	B	B	D	C	C
d_A, Approach Delay [s/veh]	31.10			26.52			20.81			27.13		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.07											
Intersection LOS	C											
Intersection V/C	0.549											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤴			⤵			⤵⤴			⤵⤴		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	6	90	120	66	90	30	10	1225	180	20	983	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	90	120	66	90	30	10	1225	180	20	983	10
Peak Hour Factor	0.8750	0.7727	0.7727	0.9427	0.7237	0.7237	0.9336	0.9336	0.9336	0.9466	0.9466	0.9466
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	29	39	18	31	10	3	328	48	5	260	3
Total Analysis Volume [veh/h]	7	116	155	70	124	41	11	1312	193	21	1038	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	51			25			19			17		
Bicycle Volume [bicycles/h]	18			8			14			21		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	30	12	0	30	48	12	48	30	12	48	30
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	2	48	48	3	49	49
g / C, Green / Cycle	0.28	0.28	0.02	0.53	0.53	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.28	0.01	0.40	0.41	0.01	0.28	0.28
s, saturation flow rate [veh/h]	1677	600	1810	1900	1787	1810	1900	1889
c, Capacity [veh/h]	474	170	36	1009	950	59	1034	1028
d1, Uniform Delay [s]	27.62	31.94	43.49	16.54	16.88	42.59	12.92	12.93
k, delay calibration	0.04	0.28	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.41	45.20	1.77	5.30	6.32	1.33	1.78	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.57	0.97	0.31	0.76	0.78	0.35	0.51	0.51
d, Delay for Lane Group [s/veh]	28.03	77.14	45.26	21.84	23.21	43.91	14.71	14.73
Lane Group LOS	C	E	D	C	C	D	B	B
Critical Lane Group	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	4.92	5.55	0.26	12.76	12.82	0.47	6.68	6.66
50th-Percentile Queue Length [ft]	122.99	138.87	6.43	318.93	320.51	11.86	166.99	166.61
95th-Percentile Queue Length [veh]	8.56	9.42	0.46	18.62	18.69	0.85	10.92	10.90
95th-Percentile Queue Length [ft]	213.93	235.50	11.57	465.38	467.31	21.36	272.96	272.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	28.03	28.03	0.00	77.14	77.14	45.26	22.41	23.21	43.91	14.72	14.73
Movement LOS		C	C		E	E	D	C	C	D	B	B
d_A, Approach Delay [s/veh]	28.03		77.14			22.68			15.29			
Approach LOS	C		E			C			B			
d_I, Intersection Delay [s/veh]	23.52											
Intersection LOS	C											
Intersection V/C	0.701											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	56.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.767

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	630	220	670	140	755	0	0	1183	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	630	220	670	140	755	0	0	1183	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9801	0.9801	0.9801	0.9632	0.9632	1.0000	1.0000	0.9688	0.9688
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	161	56	171	36	196	0	0	305	10
Total Analysis Volume [veh/h]	0	0	0	643	224	684	145	784	0	0	1221	41
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	60			11			1			7		
Bicycle Volume [bicycles/h]	0			5			0			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	35	35	35	23	55	0	0	32	32
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	9	50	37	37
g / C, Green / Cycle	0.34	0.34	0.34	0.34	0.10	0.56	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.45	0.22	0.24	0.42	0.08	0.22	0.23	0.23
s, saturation flow rate [veh/h]	900	1848	1469	900	1810	3618	3618	1855
c, Capacity [veh/h]	304	624	496	304	180	2026	1482	760
d1, Uniform Delay [s]	29.80	25.44	25.88	29.80	39.69	11.12	20.43	20.28
k, delay calibration	0.50	0.14	0.18	0.50	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	175.4	1.61	2.97	135.1	3.25	0.56	1.58	2.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.34	0.66	0.70	1.25	0.81	0.39	0.57	0.55
d, Delay for Lane Group [s/veh]	205.2	27.05	28.85	164.9	42.94	11.68	22.02	23.17
Lane Group LOS	F	C	C	F	D	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	20.78	7.22	6.36	17.38	3.26	4.22	6.83	7.07
50th-Percentile Queue Length [ft]	519.5	180.4	158.9	434.4	81.44	105.47	170.81	176.71
95th-Percentile Queue Length [veh]	33.14	11.62	10.49	27.40	5.86	7.59	11.12	11.43
95th-Percentile Queue Length [ft]	828.5	290.6	262.3	685.0	146.59	189.69	277.98	285.71



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	133.93	27.40	108.71	42.94	11.68	0.00	0.00	22.38	23.17
Movement LOS				F	C	F	D	B			C	C
d_A, Approach Delay [s/veh]	0.00			108.10			16.56			22.40		
Approach LOS	A			F			B			C		
d_I, Intersection Delay [s/veh]	56.47											
Intersection LOS	E											
Intersection V/C	0.767											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.705

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⤵⤴⤵						⤵⤴⤵			⤵⤴⤵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	150	390	250	0	0	0	0	755	670	790	1023	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	150	390	250	0	0	0	0	755	670	790	1023	0
Peak Hour Factor	0.7810	0.7810	0.7810	1.0000	1.0000	1.0000	1.0000	0.9225	0.9225	0.9309	0.9309	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	125	80	0	0	0	0	205	182	212	275	0
Total Analysis Volume [veh/h]	192	499	320	0	0	0	0	818	726	849	1099	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			31			4			0		
Bicycle Volume [bicycles/h]	16			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	37	37	37	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	37	37	37	0	0	0	0	30	30	23	53	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	90	90	90		90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21		26	26	26	29	60
g / C, Green / Cycle	0.23	0.23	0.23		0.29	0.29	0.29	0.32	0.67
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.20		0.21	0.26	0.26	0.24	0.30
s, saturation flow rate [veh/h]	1850	1729	1563		3618	1493	1493	3514	3618
c, Capacity [veh/h]	429	401	363		1054	435	435	1136	2409
d1, Uniform Delay [s]	32.92	32.92	33.40		28.75	30.50	30.50	27.20	7.23
k, delay calibration	0.04	0.04	0.04		0.04	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.63	1.74	2.83		0.37	2.49	2.49	4.51	0.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

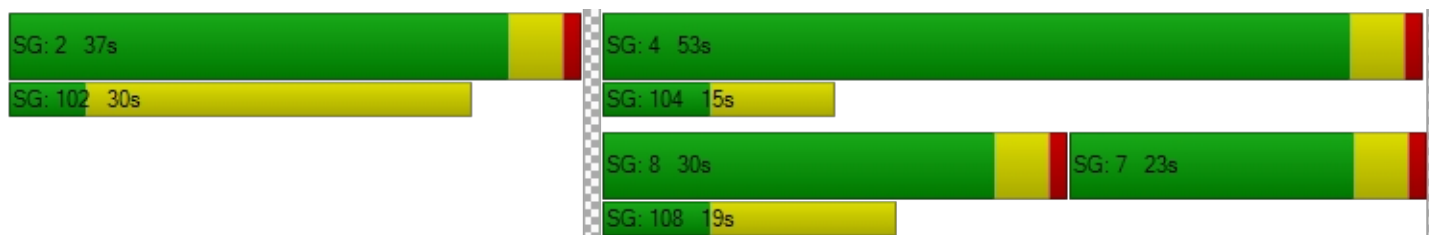
X, volume / capacity	0.83	0.83	0.88		0.73	0.89	0.89	0.75	0.46
d, Delay for Lane Group [s/veh]	34.54	34.66	36.23		29.12	32.99	32.99	31.71	7.85
Lane Group LOS	C	C	D		C	C	C	C	A
Critical Lane Group	No	No	Yes		No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.32	6.86	6.77		7.23	7.91	7.91	8.56	4.52
50th-Percentile Queue Length [ft]	183.09	171.39	169.14		180.70	197.79	197.79	214.09	113.11
95th-Percentile Queue Length [veh]	11.76	11.15	11.03		11.64	12.52	12.52	13.36	8.01
95th-Percentile Queue Length [ft]	294.04	278.74	275.79		290.93	313.11	313.11	334.06	200.32

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.54	34.62	36.23	0.00	0.00	0.00	0.00	29.12	32.99	31.71	7.85	0.00
Movement LOS	C	C	D					C	C	C	A	
d_A, Approach Delay [s/veh]	35.11			0.00			31.06			18.25		
Approach LOS	D			A			C			B		
d_I, Intersection Delay [s/veh]	26.43											
Intersection LOS	C											
Intersection V/C	0.705											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	53.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	130	480	120	170	370	90	110	1155	50	110	983	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	480	120	170	370	90	110	1155	50	110	983	60
Peak Hour Factor	0.9822	0.9822	0.9822	0.8607	0.8607	0.8607	0.8932	0.8932	0.8932	0.8556	0.8556	0.8556
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	122	31	49	107	26	31	323	14	32	287	18
Total Analysis Volume [veh/h]	132	489	122	198	430	105	123	1293	56	129	1149	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			23			16			12		
Bicycle Volume [bicycles/h]	2			7			5			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	27	43	0	19	35	0	17	48	0	10	41	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	33	33	14	37	37	10	49	49	5	44	44
g / C, Green / Cycle	0.09	0.28	0.28	0.12	0.31	0.31	0.08	0.41	0.41	0.05	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.26	0.08	0.11	0.15	0.15	0.07	0.36	0.04	0.07	0.32	0.04
s, saturation flow rate [veh/h]	1810	1900	1566	1810	1900	1750	1810	3618	1564	1810	3618	1571
c, Capacity [veh/h]	159	524	432	218	586	540	149	1471	636	82	1336	580
d1, Uniform Delay [s]	53.86	42.37	34.12	52.12	33.57	33.67	54.21	32.90	21.93	57.31	35.00	24.99
k, delay calibration	0.04	0.31	0.11	0.29	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.17	18.19	0.35	28.04	0.59	0.66	4.26	7.79	0.27	262.99	7.42	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.83	0.93	0.28	0.91	0.47	0.48	0.82	0.88	0.09	1.57	0.86	0.12
d, Delay for Lane Group [s/veh]	58.03	60.56	34.48	80.16	34.16	34.33	58.47	40.70	22.20	320.30	42.41	25.42
Lane Group LOS	E	E	C	F	C	C	E	D	C	F	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.07	16.50	2.83	7.53	6.54	6.15	3.80	18.37	1.02	8.45	16.46	1.38
50th-Percentile Queue Length [ft]	101.79	412.45	70.63	188.16	163.48	153.85	95.09	459.14	25.41	211.34	411.46	34.53
95th-Percentile Queue Length [veh]	7.33	23.16	5.09	12.03	10.73	10.22	6.85	25.39	1.83	14.62	23.11	2.49
95th-Percentile Queue Length [ft]	183.22	578.99	127.14	300.64	268.32	255.56	171.16	634.84	45.74	365.61	577.80	62.15

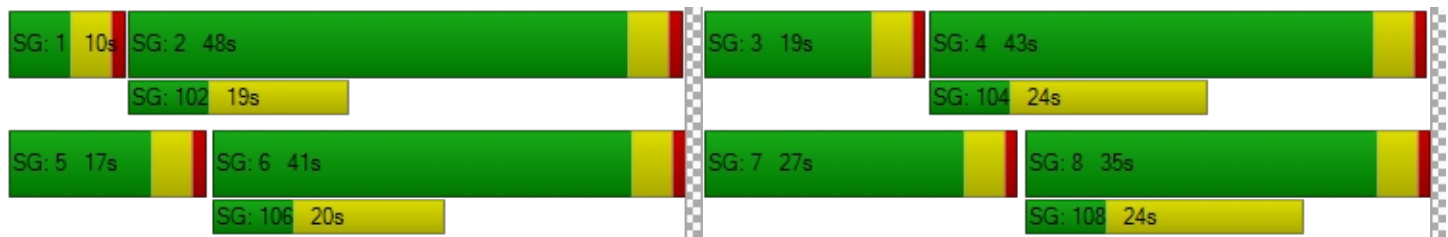


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.03	60.56	34.48	80.16	34.22	34.33	58.47	40.70	22.20	320.30	42.41	25.42
Movement LOS	E	E	C	F	C	C	E	D	C	F	D	C
d_A, Approach Delay [s/veh]	55.83			46.65			41.48			68.12		
Approach LOS	E			D			D			E		
d_I, Intersection Delay [s/veh]	53.20											
Intersection LOS	D											
Intersection V/C	0.795											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	20	613	50	112	427	50	40	390	64	100	370	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	613	50	112	427	50	40	390	64	100	370	40
Peak Hour Factor	0.9412	0.9412	0.9412	0.9288	0.9288	0.9288	0.8388	0.8388	0.8388	0.9139	0.9139	0.9139
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	163	13	30	115	13	12	116	19	27	101	11
Total Analysis Volume [veh/h]	21	651	53	121	460	54	48	465	76	109	405	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			16			26			9		
Bicycle Volume [bicycles/h]	2			8			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	40	40	40	40	31	31	31	31	31
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.02	0.19	0.19	0.16	0.14	0.14	0.05	0.24	0.05	0.12	0.24
s, saturation flow rate [veh/h]	899	1900	1841	753	1900	1822	955	1900	1570	941	1862
c, Capacity [veh/h]	456	953	924	371	953	914	231	728	602	225	713
d1, Uniform Delay [s]	14.37	12.22	12.24	18.72	11.51	11.53	30.59	20.13	15.98	33.16	20.04
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.05	0.04	0.04	0.05
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	1.12	1.17	2.33	0.71	0.75	0.16	0.47	0.03	0.60	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

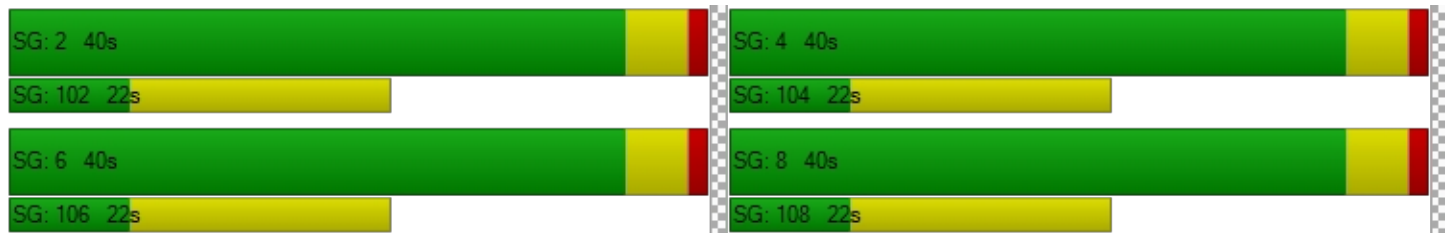
X, volume / capacity	0.05	0.37	0.38	0.33	0.27	0.28	0.21	0.64	0.13	0.48	0.63
d, Delay for Lane Group [s/veh]	14.56	13.34	13.41	21.05	12.22	12.28	30.75	20.60	16.01	33.76	20.44
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.24	3.88	3.80	1.83	2.66	2.59	0.81	6.62	0.85	2.00	6.35
50th-Percentile Queue Length [ft]	6.12	97.07	95.08	45.75	66.58	64.75	20.28	165.58	21.32	50.02	158.85
95th-Percentile Queue Length [veh]	0.44	6.99	6.85	3.29	4.79	4.66	1.46	10.84	1.53	3.60	10.49
95th-Percentile Queue Length [ft]	11.02	174.72	171.15	82.35	119.85	116.55	36.50	271.10	38.37	90.04	262.20

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.56	13.37	13.41	21.05	12.25	12.28	30.75	20.60	16.01	33.76	20.44	20.44
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	13.41			13.93			20.84			23.04		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.43											
Intersection LOS	B											
Intersection V/C	0.434											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.493

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	130	610	10	40	530	50	140	462	40	40	288	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	610	10	40	530	50	140	462	40	40	288	100
Peak Hour Factor	0.8948	0.8948	0.8948	0.9167	0.9167	0.9167	0.8683	0.8683	0.8683	0.9194	0.9194	0.9194
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	170	3	11	145	14	40	133	12	11	78	27
Total Analysis Volume [veh/h]	145	682	11	44	578	55	161	532	46	44	313	109
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			33			2			19		
Bicycle Volume [bicycles/h]	6			21			2			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	46	46	46	35	35	35	35	35
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.18	0.18	0.18	0.06	0.17	0.17	0.15	0.31	0.05	0.16	0.07
s, saturation flow rate [veh/h]	805	1900	1887	763	1900	1831	1082	1867	849	1900	1573
c, Capacity [veh/h]	399	963	957	375	963	928	335	730	146	743	615
d1, Uniform Delay [s]	20.02	13.39	13.39	17.94	13.16	13.19	30.90	24.18	40.33	19.99	17.94
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.18	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.56	1.05	1.06	0.64	0.93	0.98	0.40	3.20	0.42	0.14	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.36	0.36	0.36	0.12	0.33	0.34	0.48	0.79	0.30	0.42	0.18
d, Delay for Lane Group [s/veh]	22.58	14.44	14.45	18.57	14.09	14.17	31.30	27.38	40.75	20.13	17.99
Lane Group LOS	C	B	B	B	B	B	C	C	D	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	2.40	4.19	4.17	0.64	3.80	3.71	3.07	10.81	0.94	4.58	1.43
50th-Percentile Queue Length [ft]	59.99	104.75	104.25	15.89	94.97	92.78	76.69	270.27	23.58	114.44	35.75
95th-Percentile Queue Length [veh]	4.32	7.54	7.51	1.14	6.84	6.68	5.52	16.20	1.70	8.09	2.57
95th-Percentile Queue Length [ft]	107.99	188.55	187.65	28.59	170.94	167.01	138.05	405.07	42.44	202.16	64.36

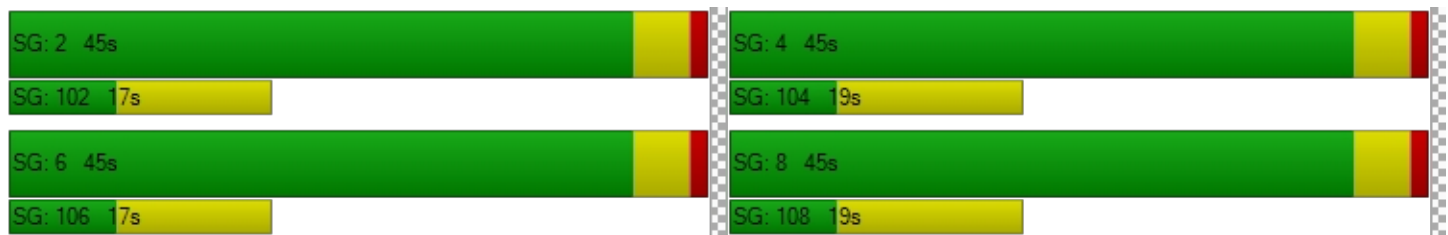


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.58	14.44	14.45	18.57	14.12	14.17	31.30	27.38	27.38	40.75	20.13	17.99
Movement LOS	C	B	B	B	B	B	C	C	C	D	C	B
d_A, Approach Delay [s/veh]	15.85			14.42			28.24			21.58		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.84											
Intersection LOS	B											
Intersection V/C	0.493											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↻			↵↻			⊕			↻↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	30	480	30	40	480	50	70	140	50	40	157	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	480	30	40	480	50	70	140	50	40	157	30
Peak Hour Factor	0.9236	0.9236	0.9236	0.8455	0.8455	0.8455	0.8792	0.8792	0.8792	0.8254	0.8254	0.8254
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	130	8	12	142	15	20	40	14	12	48	9
Total Analysis Volume [veh/h]	32	520	32	47	568	59	80	159	57	48	190	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			34			76			85		
Bicycle Volume [bicycles/h]	1			2			10			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.43	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.30	0.05	0.34	0.19	0.14	0.02
s, saturation flow rate [veh/h]	811	1865	870	1841	1541	1759	1524
c, Capacity [veh/h]	180	773	234	763	743	833	659
d1, Uniform Delay [s]	26.79	14.64	23.96	15.63	11.80	11.07	9.92
k, delay calibration	0.04	0.08	0.04	0.16	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	0.95	0.15	3.30	1.60	0.86	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

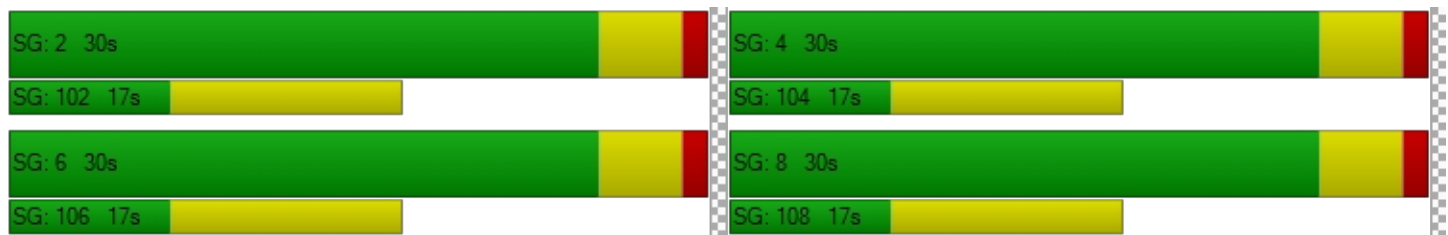
X, volume / capacity	0.18	0.71	0.20	0.82	0.40	0.29	0.05
d, Delay for Lane Group [s/veh]	26.97	15.59	24.12	18.93	13.39	11.93	10.08
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	5.61	0.59	7.26	2.66	1.99	0.27
50th-Percentile Queue Length [ft]	10.69	140.28	14.68	181.40	66.43	49.73	6.79
95th-Percentile Queue Length [veh]	0.77	9.50	1.06	11.67	4.78	3.58	0.49
95th-Percentile Queue Length [ft]	19.23	237.40	26.43	291.85	119.58	89.52	12.21

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.97	15.59	15.59	24.12	18.93	18.93	13.39	13.39	13.39	11.93	11.93	10.08
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	16.22			19.29			13.39			11.69		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.22											
Intersection LOS	B											
Intersection V/C	0.533											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.480

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	952	58	100	791	40	75	260	120	120	347	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	952	58	100	791	40	75	260	120	120	347	30
Peak Hour Factor	0.9496	0.9496	0.9496	0.9649	0.9649	0.9649	0.8178	0.8178	0.8178	0.9341	0.9341	0.9341
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	251	15	26	205	10	23	79	37	32	93	8
Total Analysis Volume [veh/h]	74	1003	61	104	820	41	92	318	147	128	371	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			36			57			70		
Bicycle Volume [bicycles/h]	10			5			9			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	45	45	45	45	45	45	26	26	26	26	26	26
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.11	0.28	0.28	0.19	0.23	0.23	0.09	0.17	0.10	0.12	0.20	0.02
s, saturation flow rate [veh/h]	646	1900	1850	538	1900	1849	1017	1900	1534	1061	1900	1552
c, Capacity [veh/h]	355	1065	1037	288	1065	1036	221	617	498	257	617	504
d1, Uniform Delay [s]	15.69	10.78	10.81	19.77	10.02	10.05	33.38	21.90	20.17	32.31	22.66	18.62
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.33	1.71	1.78	3.49	1.16	1.21	0.47	0.25	0.12	0.56	0.35	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.50	0.51	0.36	0.41	0.41	0.42	0.52	0.30	0.50	0.60	0.06
d, Delay for Lane Group [s/veh]	17.02	12.49	12.59	23.26	11.18	11.26	33.85	22.15	20.29	32.87	23.01	18.64
Lane Group LOS	B	B	B	C	B	B	C	C	C	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.97	5.51	5.43	1.69	4.10	4.06	1.69	4.66	1.98	2.38	5.74	0.41
50th-Percentile Queue Length [ft]	24.19	137.70	135.78	42.25	102.52	101.39	42.33	116.58	49.59	59.39	143.55	10.13
95th-Percentile Queue Length [veh]	1.74	9.36	9.25	3.04	7.38	7.30	3.05	8.20	3.57	4.28	9.67	0.73
95th-Percentile Queue Length [ft]	43.54	233.93	231.33	76.04	184.54	182.50	76.19	205.11	89.27	106.91	241.80	18.24

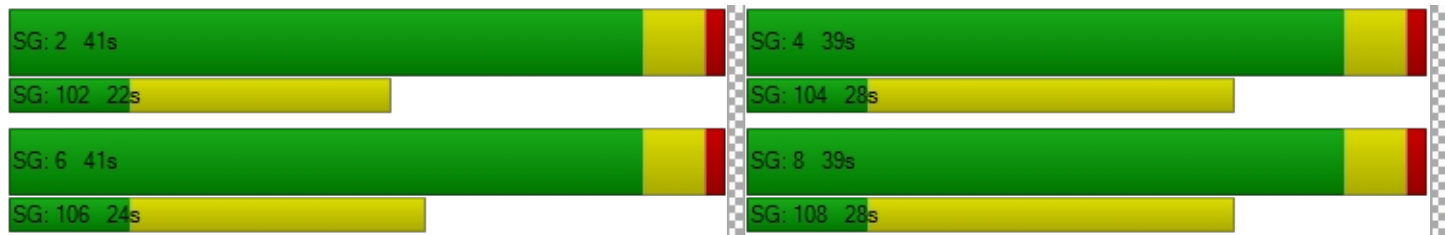


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.02	12.53	12.59	23.26	11.22	11.26	33.85	22.15	20.29	32.87	23.01	18.64
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	B
d_A, Approach Delay [s/veh]	12.83			12.52			23.59			25.12		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.66											
Intersection LOS	B											
Intersection V/C	0.480											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.411

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	126	80	40	79	60	40	345	30	40	445	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	126	80	40	79	60	40	345	30	40	445	20
Peak Hour Factor	0.8788	0.8788	0.8788	0.9728	0.9728	0.9728	0.9091	0.9091	0.9091	0.9041	0.9041	0.9041
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	36	23	10	20	15	11	95	8	11	123	6
Total Analysis Volume [veh/h]	23	143	91	41	81	62	44	380	33	44	492	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			15			43			6		
Bicycle Volume [bicycles/h]	13			4			7			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	57.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	54	54	54	54	54	54
g / C, Green / Cycle	0.21	0.21	0.21	0.67	0.67	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.04	0.05	0.20	0.02	0.04	0.26	0.01
s, saturation flow rate [veh/h]	1693	1325	1575	917	1900	1559	1016	1900	1545
c, Capacity [veh/h]	406	339	332	571	1281	1051	656	1281	1042
d1, Uniform Delay [s]	29.23	26.59	25.88	9.50	5.29	4.32	8.19	5.71	4.29
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.64	0.27	0.26	0.59	0.06	0.20	0.87	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

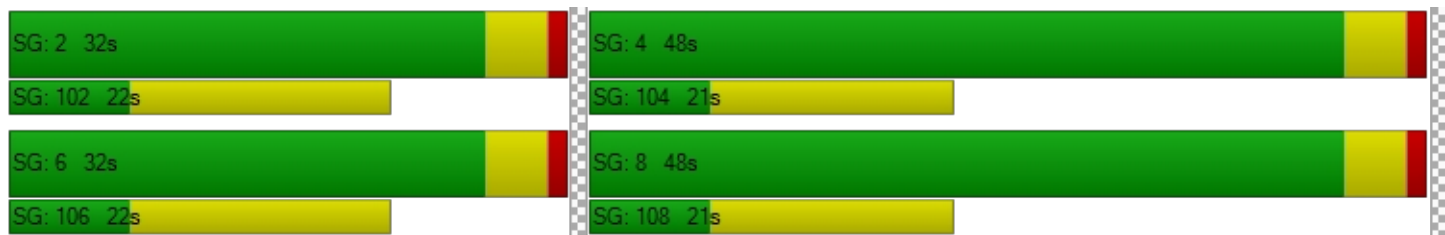
X, volume / capacity	0.63	0.36	0.19	0.08	0.30	0.03	0.07	0.38	0.02
d, Delay for Lane Group [s/veh]	30.87	27.23	26.15	9.76	5.88	4.38	8.39	6.59	4.33
Lane Group LOS	C	C	C	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	4.54	1.94	0.95	0.40	2.27	0.16	0.36	3.19	0.11
50th-Percentile Queue Length [ft]	113.50	48.47	23.86	9.91	56.84	4.07	8.88	79.86	2.69
95th-Percentile Queue Length [veh]	8.03	3.49	1.72	0.71	4.09	0.29	0.64	5.75	0.19
95th-Percentile Queue Length [ft]	200.86	87.24	42.95	17.84	102.31	7.32	15.99	143.75	4.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.87	30.87	30.87	27.23	27.23	26.15	9.76	5.88	4.38	8.39	6.59	4.33
Movement LOS	C	C	C	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	30.87			26.87			6.15			6.64		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	13.32											
Intersection LOS	B											
Intersection V/C	0.411											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	20	716	30	80	500	85	50	350	30	125	410	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	716	30	80	500	85	50	350	30	125	410	30
Peak Hour Factor	0.9631	0.9631	0.9631	0.9537	0.9537	0.9537	0.9384	0.9384	0.9384	0.9383	0.9383	0.9383
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	186	8	21	131	22	13	93	8	33	109	8
Total Analysis Volume [veh/h]	21	743	31	84	524	89	53	373	32	133	437	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			12			30			26		
Bicycle Volume [bicycles/h]	8			5			9			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	17.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28	28
g / C, Green / Cycle	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.03	0.21	0.21	0.12	0.17	0.17	0.05	0.20	0.02	0.13	0.23	0.02
s, saturation flow rate [veh/h]	819	1900	1868	705	1900	1788	964	1900	1570	1021	1900	1576
c, Capacity [veh/h]	441	1028	1010	374	1028	967	202	653	540	246	653	542
d1, Uniform Delay [s]	13.40	10.59	10.60	16.20	10.09	10.11	33.02	21.41	17.57	33.01	22.35	17.57
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.10	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	1.06	1.09	1.39	0.77	0.83	0.25	0.29	0.02	0.69	1.09	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.38	0.38	0.22	0.31	0.31	0.26	0.57	0.06	0.54	0.67	0.06
d, Delay for Lane Group [s/veh]	13.60	11.66	11.69	17.59	10.85	10.94	33.27	21.71	17.59	33.70	23.45	17.58
Lane Group LOS	B	B	B	B	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.24	3.90	3.85	1.14	2.97	2.86	0.95	5.47	0.38	2.48	6.82	0.38
50th-Percentile Queue Length [ft]	5.92	97.47	96.37	28.43	74.37	71.49	23.80	136.73	9.59	62.03	170.54	9.59
95th-Percentile Queue Length [veh]	0.43	7.02	6.94	2.05	5.35	5.15	1.71	9.30	0.69	4.47	11.10	0.69
95th-Percentile Queue Length [ft]	10.66	175.45	173.47	51.17	133.87	128.68	42.83	232.62	17.27	111.65	277.62	17.27



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.60	11.67	11.69	17.59	10.89	10.94	33.27	21.71	17.59	33.70	23.45	17.58
Movement LOS	B	B	B	B	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.73			11.70			22.76			25.40		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.93											
Intersection LOS	B											
Intersection V/C	0.436											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	40	478	40	70	275	40	70	380	67	80	380	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	478	40	70	275	40	70	380	67	80	380	50
Peak Hour Factor	0.9000	0.9000	0.9000	0.9073	0.9073	0.9073	0.8968	0.8968	0.8968	0.9433	0.9433	0.9433
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	133	11	19	76	11	20	106	19	21	101	13
Total Analysis Volume [veh/h]	44	531	44	77	303	44	78	424	75	85	403	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	39			24			17			18		
Bicycle Volume [bicycles/h]	38			38			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	22	22	22	22	22	22
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.31	0.31	0.31	0.31	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.04	0.28	0.03	0.09	0.16	0.03	0.08	0.22	0.05	0.09	0.21	0.03
s, saturation flow rate [veh/h]	1090	1900	1557	886	1900	1556	983	1900	1515	965	1900	1530
c, Capacity [veh/h]	545	1056	865	375	1056	865	241	594	473	227	594	478
d1, Uniform Delay [s]	12.87	9.57	7.10	18.37	8.20	7.10	28.07	21.26	17.38	29.10	20.96	17.11
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	1.71	0.11	1.24	0.68	0.11	0.29	0.60	0.06	0.38	0.51	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

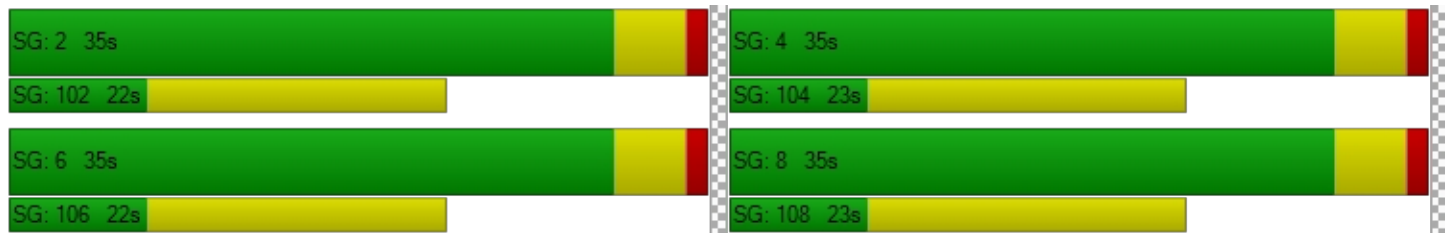
X, volume / capacity	0.08	0.50	0.05	0.21	0.29	0.05	0.32	0.71	0.16	0.37	0.68	0.11
d, Delay for Lane Group [s/veh]	13.16	11.28	7.21	19.61	8.89	7.21	28.36	21.87	17.43	29.48	21.47	17.15
Lane Group LOS	B	B	A	B	A	A	C	C	B	C	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.43	4.56	0.28	1.00	2.19	0.28	1.19	5.82	0.83	1.33	5.45	0.58
50th-Percentile Queue Length [ft]	10.76	114.07	6.91	25.02	54.68	6.91	29.77	145.50	20.86	33.35	136.13	14.51
95th-Percentile Queue Length [veh]	0.77	8.07	0.50	1.80	3.94	0.50	2.14	9.78	1.50	2.40	9.27	1.04
95th-Percentile Queue Length [ft]	19.36	201.66	12.43	45.03	98.43	12.43	53.59	244.41	37.55	60.02	231.80	26.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.16	11.28	7.21	19.61	8.89	7.21	28.36	21.87	17.43	29.48	21.47	17.15
Movement LOS	B	B	A	B	A	A	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	11.12			10.66			22.17			22.31		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.78											
Intersection LOS	B											
Intersection V/C	0.503											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	40	450	10	140	450	130	40	407	190	90	290	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	450	10	140	450	130	40	407	190	90	290	120
Peak Hour Factor	0.8670	0.8670	0.8670	0.8183	0.8183	0.8183	0.8983	0.8983	0.8983	0.9643	0.9643	0.9643
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	130	3	43	137	40	11	113	53	23	75	31
Total Analysis Volume [veh/h]	46	519	12	171	550	159	45	453	212	93	301	124
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			23			10			9		
Bicycle Volume [bicycles/h]	4			6			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.06	0.14	0.14	0.19	0.19	0.20	0.04	0.24	0.14	0.10	0.16	0.08
s, saturation flow rate [veh/h]	751	1900	1883	885	1900	1737	1085	1900	1563	946	1900	1565
c, Capacity [veh/h]	347	917	909	428	917	839	360	722	594	255	722	595
d1, Uniform Delay [s]	16.97	10.89	10.89	17.37	11.61	11.64	21.24	17.67	15.57	27.36	15.99	14.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	0.80	0.81	2.77	1.31	1.46	0.06	0.34	0.13	0.33	0.14	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.29	0.29	0.40	0.40	0.41	0.12	0.63	0.36	0.37	0.42	0.21
d, Delay for Lane Group [s/veh]	17.76	11.69	11.70	20.15	12.92	13.10	21.30	18.00	15.70	27.69	16.13	14.68
Lane Group LOS	B	B	B	C	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.64	2.84	2.82	2.18	3.29	3.08	0.57	5.53	2.27	1.41	3.31	1.25
50th-Percentile Queue Length [ft]	16.07	70.96	70.57	54.49	82.37	77.12	14.18	138.24	56.86	35.26	82.82	31.18
95th-Percentile Queue Length [veh]	1.16	5.11	5.08	3.92	5.93	5.55	1.02	9.39	4.09	2.54	5.96	2.24
95th-Percentile Queue Length [ft]	28.93	127.73	127.02	98.08	148.27	138.82	25.52	234.65	102.35	63.47	149.08	56.12

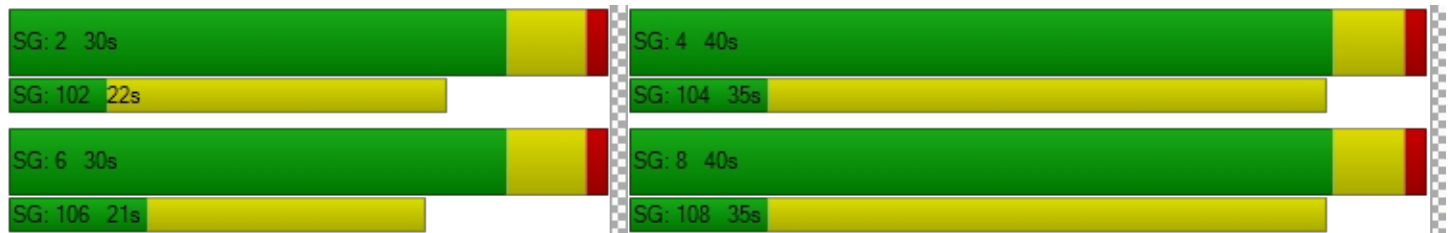


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.76	11.69	11.70	20.15	12.98	13.10	21.30	18.00	15.70	27.69	16.13	14.68
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.18			14.39			17.52			17.86		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.41											
Intersection LOS	B											
Intersection V/C	0.434											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	7.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.490

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	10	530	70	40	460	27	60	57	40	34	99	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	530	70	40	460	27	60	57	40	34	99	20
Peak Hour Factor	0.8414	0.8414	0.8414	0.8672	0.8672	0.8672	0.9278	0.9278	0.9278	0.8357	0.8357	0.8357
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	157	21	12	133	8	16	15	11	10	30	6
Total Analysis Volume [veh/h]	12	630	83	46	530	31	65	61	43	41	118	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			13			53			38		
Bicycle Volume [bicycles/h]	0			1			9			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	34	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	17	17	17	8	8
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.01	0.39	0.06	0.28	0.02	0.10	0.10
s, saturation flow rate [veh/h]	875	1848	740	1900	1521	1630	1778
c, Capacity [veh/h]	438	925	312	951	762	516	532
d1, Uniform Delay [s]	9.45	6.82	13.50	5.81	4.28	11.13	11.20
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.52	0.08	0.19	0.01	0.14	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

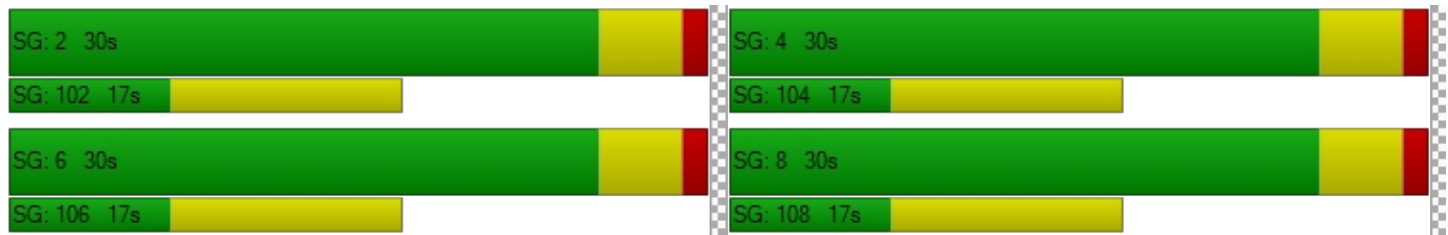
X, volume / capacity	0.03	0.77	0.15	0.56	0.04	0.33	0.34
d, Delay for Lane Group [s/veh]	9.46	7.34	13.58	6.00	4.28	11.27	11.34
Lane Group LOS	A	A	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.05	2.18	0.26	1.34	0.06	0.79	0.86
50th-Percentile Queue Length [ft]	1.26	54.43	6.55	33.60	1.43	19.77	21.54
95th-Percentile Queue Length [veh]	0.09	3.92	0.47	2.42	0.10	1.42	1.55
95th-Percentile Queue Length [ft]	2.27	97.98	11.79	60.48	2.58	35.59	38.76

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.46	7.34	7.34	13.58	6.00	4.28	11.27	11.27	11.27	11.34	11.34	11.34
Movement LOS	A	A	A	B	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.38			6.49			11.27			11.34		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.88											
Intersection LOS	A											
Intersection V/C	0.490											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	30	1012	80	60	981	30	100	157	70	60	259	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1012	80	60	981	30	100	157	70	60	259	50
Peak Hour Factor	0.9061	0.9061	0.9061	0.9609	0.9609	0.9609	0.8670	0.8670	0.8670	0.8780	0.8780	0.8780
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	279	22	16	255	8	29	45	20	17	74	14
Total Analysis Volume [veh/h]	33	1117	88	62	1021	31	115	181	81	68	295	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	42			65			12			39		
Bicycle Volume [bicycles/h]	8			7			3			7		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.06	0.32	0.32	0.13	0.28	0.28	0.11	0.15	0.06	0.19
s, saturation flow rate [veh/h]	544	1900	1845	471	1900	1872	1028	1756	1099	1828
c, Capacity [veh/h]	282	1043	1013	238	1043	1028	243	590	300	614
d1, Uniform Delay [s]	17.80	11.97	12.00	21.67	11.26	11.28	32.64	20.73	27.92	21.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	2.39	2.50	2.64	1.76	1.80	0.53	0.20	0.14	0.32
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.58	0.59	0.26	0.51	0.51	0.47	0.44	0.23	0.57
d, Delay for Lane Group [s/veh]	18.64	14.36	14.50	24.31	13.02	13.08	33.17	20.93	28.06	22.16
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	6.91	6.79	1.07	5.91	5.87	2.08	3.61	1.09	5.12
50th-Percentile Queue Length [ft]	11.55	172.74	169.71	26.86	147.81	146.79	52.00	90.32	27.21	128.06
95th-Percentile Queue Length [veh]	0.83	11.22	11.06	1.93	9.90	9.85	3.74	6.50	1.96	8.83
95th-Percentile Queue Length [ft]	20.79	280.51	276.53	48.34	247.50	246.14	93.61	162.57	48.97	220.86

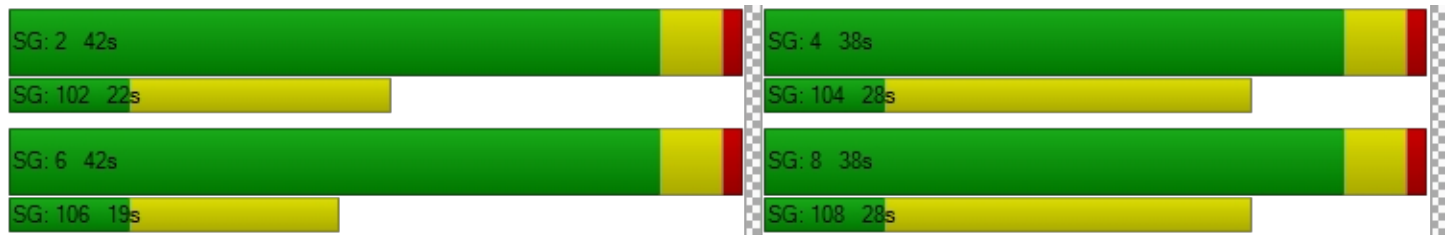


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.64	14.42	14.50	24.31	13.05	13.08	33.17	20.93	20.93	28.06	22.16	22.16
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.54			13.68			24.66			23.11		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.59											
Intersection LOS	B											
Intersection V/C	0.515											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.919

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	186	60	50	119	30	70	357	60	60	349	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	186	60	50	119	30	70	357	60	60	349	20
Peak Hour Factor	0.7226	0.7226	0.7226	0.9611	0.9611	0.9611	0.9605	0.9605	0.9605	0.9646	0.9646	0.9646
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	64	21	13	31	8	18	93	16	16	90	5
Total Analysis Volume [veh/h]	28	257	83	52	124	31	73	372	62	62	362	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			18			24			24		
Bicycle Volume [bicycles/h]	7			9			2			18		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	58.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	50	50	50	50
g / C, Green / Cycle	0.26	0.26	0.26	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.23	0.17	0.02	0.69	0.04	0.62	0.01
s, saturation flow rate [veh/h]	1605	1046	1540	646	1558	683	1545
c, Capacity [veh/h]	464	329	399	456	975	479	967
d1, Uniform Delay [s]	28.39	24.41	22.39	16.31	5.83	15.16	5.67
k, delay calibration	0.20	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.47	1.35	0.08	36.31	0.13	20.65	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.79	0.53	0.08	0.97	0.06	0.88	0.02
d, Delay for Lane Group [s/veh]	33.86	25.76	22.47	52.62	5.95	35.81	5.71
Lane Group LOS	C	C	C	D	A	D	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	7.14	2.73	0.43	11.45	0.37	7.29	0.12
50th-Percentile Queue Length [ft]	178.41	68.32	10.77	286.17	9.27	182.16	3.05
95th-Percentile Queue Length [veh]	11.52	4.92	0.78	17.00	0.67	11.71	0.22
95th-Percentile Queue Length [ft]	287.94	122.98	19.39	424.89	16.69	292.83	5.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	33.86	33.86	33.86	25.76	25.76	22.47	52.62	52.62	5.95	35.81	35.81	5.71
Movement LOS	C	C	C	C	C	C	D	D	A	D	D	A
d_A, Approach Delay [s/veh]	33.86			25.27			46.92			34.39		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	37.18											
Intersection LOS	D											
Intersection V/C	0.919											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	10	791	70	26	756	67	50	370	48	69	330	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	791	70	26	756	67	50	370	48	69	330	60
Peak Hour Factor	0.9138	0.9138	0.9138	0.9640	0.9640	0.9640	0.9724	0.9724	0.9724	0.9019	0.9019	0.9019
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	216	19	7	196	17	13	95	12	19	91	17
Total Analysis Volume [veh/h]	11	866	77	27	784	70	51	380	49	77	366	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			8			29			23		
Bicycle Volume [bicycles/h]	8			4			8			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	16.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.02	0.25	0.25	0.04	0.23	0.23	0.05	0.23	0.08	0.24
s, saturation flow rate [veh/h]	655	1900	1835	603	1900	1837	962	1856	972	1834
c, Capacity [veh/h]	348	1043	1007	316	1043	1008	187	624	194	617
d1, Uniform Delay [s]	14.94	10.88	10.91	16.33	10.55	10.57	34.11	22.91	34.64	23.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.10	0.04	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.17	1.45	1.52	0.53	1.22	1.27	0.29	1.28	0.49	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.03	0.46	0.46	0.09	0.42	0.42	0.27	0.69	0.40	0.70
d, Delay for Lane Group [s/veh]	15.10	12.34	12.43	16.86	11.77	11.84	34.40	24.19	35.13	24.60
Lane Group LOS	B	B	B	B	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.13	4.97	4.86	0.36	4.35	4.24	0.92	6.73	1.43	6.87
50th-Percentile Queue Length [ft]	3.36	124.32	121.42	8.92	108.71	106.12	23.10	168.17	35.68	171.81
95th-Percentile Queue Length [veh]	0.24	8.63	8.47	0.64	7.77	7.62	1.66	10.98	2.57	11.17
95th-Percentile Queue Length [ft]	6.05	215.74	211.78	16.05	194.20	190.59	41.59	274.51	64.23	279.30



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.10	12.38	12.43	16.86	11.80	11.84	34.40	24.19	24.19	35.13	24.60	24.60
Movement LOS	B	B	B	B	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.41			11.96			25.27			26.19		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.94											
Intersection LOS	B											
Intersection V/C	0.489											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	38	567	10	20	369	40	60	270	30	120	220	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	567	10	20	369	40	60	270	30	120	220	66
Peak Hour Factor	0.9079	0.9079	0.9079	0.8297	0.8297	0.8297	0.9604	0.9604	0.9604	0.9889	0.9889	0.9889
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	156	3	6	111	12	16	70	8	30	56	17
Total Analysis Volume [veh/h]	42	625	11	24	445	48	62	281	31	121	222	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			26			41			59		
Bicycle Volume [bicycles/h]	13			5			20			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	38	38	38	22	22	22	22
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.04	0.33	0.01	0.03	0.23	0.03	0.06	0.17	0.11	0.16
s, saturation flow rate [veh/h]	951	1900	1552	811	1900	1542	1063	1848	1063	1760
c, Capacity [veh/h]	473	1045	854	353	1045	848	263	589	259	561
d1, Uniform Delay [s]	13.64	10.56	7.14	17.27	9.25	7.31	26.79	19.55	28.77	19.45
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	2.53	0.03	0.37	1.27	0.13	0.17	0.28	0.49	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.60	0.01	0.07	0.43	0.06	0.24	0.53	0.47	0.52
d, Delay for Lane Group [s/veh]	14.01	13.09	7.16	17.65	10.52	7.44	26.96	19.83	29.26	19.72
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.43	6.01	0.07	0.29	3.66	0.31	0.89	3.84	1.87	3.54
50th-Percentile Queue Length [ft]	10.86	150.18	1.73	7.32	91.48	7.76	22.32	96.06	46.83	88.52
95th-Percentile Queue Length [veh]	0.78	10.03	0.12	0.53	6.59	0.56	1.61	6.92	3.37	6.37
95th-Percentile Queue Length [ft]	19.55	250.67	3.12	13.18	164.66	13.97	40.18	172.91	84.29	159.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.01	13.09	7.16	17.65	10.52	7.44	26.96	19.83	19.83	29.26	19.72	19.72
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.05			10.57			21.01			22.53		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.87											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	577	180	110	444	131	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	577	180	110	444	131	80
Peak Hour Factor	0.8426	0.8426	0.8903	0.8903	0.8214	0.8214
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	171	53	31	125	40	24
Total Analysis Volume [veh/h]	685	214	124	499	159	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		7		40	
Bicycle Volume [bicycles/h]	0		0		14	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	34	34	34	34	34	34
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	19	6	6
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.36	0.14	0.16	0.26	0.09	0.06
s, saturation flow rate [veh/h]	1900	1556	762	1900	1810	1509
c, Capacity [veh/h]	1038	850	383	1038	336	280
d1, Uniform Delay [s]	5.53	4.10	12.23	4.79	12.47	12.16
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.27	0.06	0.18	0.13	0.38	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.66	0.25	0.32	0.48	0.47	0.35
d, Delay for Lane Group [s/veh]	5.80	4.16	12.41	4.92	12.86	12.43
Lane Group LOS	A	A	B	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.63	0.37	0.68	1.01	0.93	0.55
50th-Percentile Queue Length [ft]	40.64	9.30	17.08	25.37	23.21	13.80
95th-Percentile Queue Length [veh]	2.93	0.67	1.23	1.83	1.67	0.99
95th-Percentile Queue Length [ft]	73.14	16.74	30.74	45.67	41.77	24.83

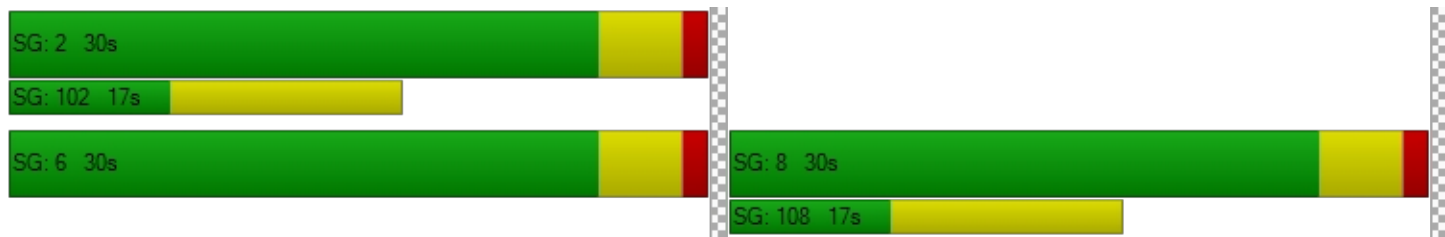


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	5.80	4.16	12.41	4.92	12.86	12.43
Movement LOS	A	A	B	A	B	B
d_A, Approach Delay [s/veh]	5.41		6.41		12.70	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.81					
Intersection LOS	A					
Intersection V/C	0.448					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.600

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1000	102	107	960	50	51	259	146	60	408	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1000	102	107	960	50	51	259	146	60	408	40
Peak Hour Factor	0.8420	0.8420	0.8420	0.9573	0.9573	0.9573	0.8849	0.8849	0.8849	0.8825	0.8825	0.8825
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	297	30	28	251	13	14	73	41	17	116	11
Total Analysis Volume [veh/h]	36	1188	121	112	1003	52	58	293	165	68	462	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			26			42			33		
Bicycle Volume [bicycles/h]	3			2			3			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	41	41	41	41	41	29	29	29	29	29
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.52	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.07	0.33	0.08	0.23	0.28	0.28	0.06	0.15	0.11	0.06	0.27
s, saturation flow rate [veh/h]	542	3618	1555	479	1900	1855	901	1900	1559	1091	1864
c, Capacity [veh/h]	259	1872	805	218	983	960	177	698	573	330	685
d1, Uniform Delay [s]	20.26	13.86	10.10	28.06	12.93	12.97	34.85	18.91	17.88	25.97	21.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.12	1.65	0.40	8.43	2.14	2.22	1.06	0.40	0.27	0.31	2.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

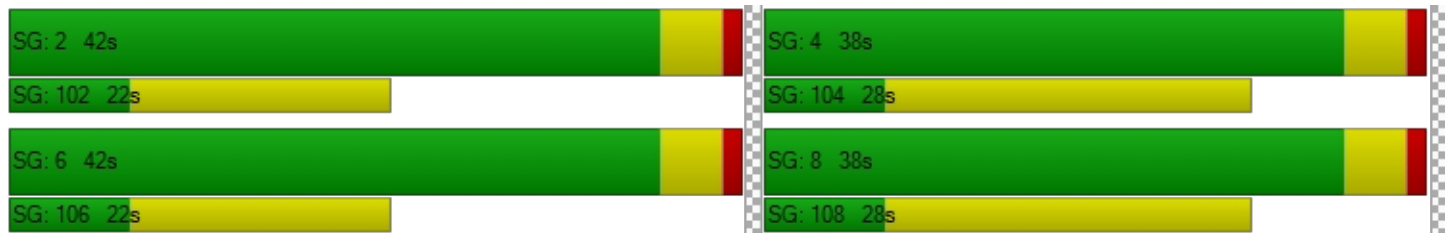
X, volume / capacity	0.14	0.63	0.15	0.51	0.54	0.54	0.33	0.42	0.29	0.21	0.74
d, Delay for Lane Group [s/veh]	21.38	15.52	10.49	36.49	15.07	15.19	35.91	19.31	18.16	26.27	24.74
Lane Group LOS	C	B	B	D	B	B	D	B	B	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.57	7.55	1.14	2.43	6.20	6.13	1.12	3.95	2.11	1.09	8.47
50th-Percentile Queue Length [ft]	14.17	188.77	28.62	60.87	154.92	153.19	27.95	98.76	52.66	27.33	211.77
95th-Percentile Queue Length [veh]	1.02	12.06	2.06	4.38	10.28	10.19	2.01	7.11	3.79	1.97	13.24
95th-Percentile Queue Length [ft]	25.50	301.44	51.52	109.57	256.98	254.69	50.30	177.77	94.79	49.20	331.09

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.38	15.52	10.49	36.49	15.13	15.19	35.91	19.31	18.16	26.27	24.74	24.74
Movement LOS	C	B	B	D	B	B	D	B	B	C	C	C
d_A, Approach Delay [s/veh]	15.22			17.18			20.81			24.92		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	18.20											
Intersection LOS	B											
Intersection V/C	0.600											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	10	264	22	107	139	17	70	490	114	35	752	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	264	22	107	139	17	70	490	114	35	752	20
Peak Hour Factor	0.8654	0.8654	0.8654	0.8125	0.8125	0.8125	0.9293	0.9293	0.9293	0.9343	0.9343	0.9343
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	76	6	33	43	5	19	132	31	9	201	5
Total Analysis Volume [veh/h]	12	305	25	132	171	21	75	527	123	37	805	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	37			18			55			25		
Bicycle Volume [bicycles/h]	4			3			11			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	44	44	44	44	44
g / C, Green / Cycle	0.33	0.33	0.33	0.33	0.33	0.55	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.01	0.18	0.22	0.29	0.04	0.11	0.18	0.18	0.05	0.44
s, saturation flow rate [veh/h]	1229	1864	600	600	600	674	1900	1744	791	1887
c, Capacity [veh/h]	131	621	184	200	200	219	1049	962	434	1042
d1, Uniform Delay [s]	37.71	21.61	22.80	24.87	18.43	29.40	9.75	9.79	13.40	14.27
k, delay calibration	0.11	0.11	0.18	0.31	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.71	8.17	24.24	0.23	4.21	0.80	0.91	0.39	6.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.53	0.72	0.86	0.11	0.34	0.32	0.33	0.09	0.79
d, Delay for Lane Group [s/veh]	38.01	22.31	30.97	49.11	18.65	33.61	10.55	10.70	13.79	20.48
Lane Group LOS	D	C	C	D	B	C	B	B	B	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.23	4.81	2.40	4.14	0.27	1.53	3.12	2.97	0.42	12.21
50th-Percentile Queue Length [ft]	5.83	120.21	59.89	103.51	6.67	38.25	77.96	74.15	10.57	305.16
95th-Percentile Queue Length [veh]	0.42	8.40	4.31	7.45	0.48	2.75	5.61	5.34	0.76	17.94
95th-Percentile Queue Length [ft]	10.49	210.12	107.80	186.31	12.01	68.85	140.33	133.46	19.02	448.41

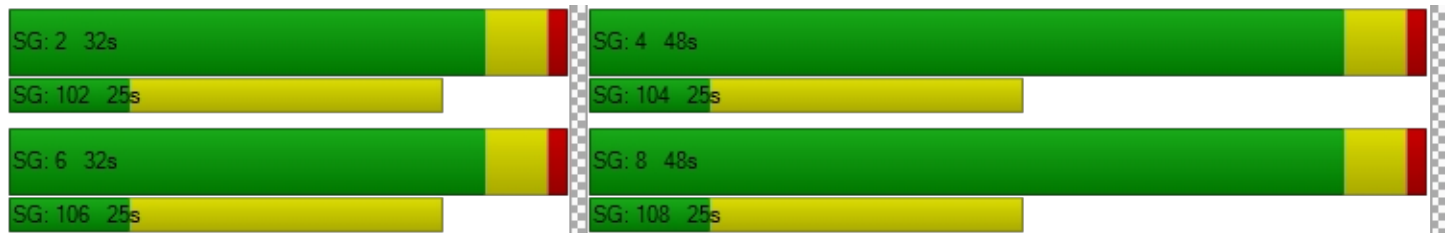


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.01	22.31	22.31	30.97	49.11	18.65	33.61	10.60	10.70	13.79	20.48	20.48
Movement LOS	D	C	C	C	D	B	C	B	B	B	C	C
d_A, Approach Delay [s/veh]	22.87			39.74			13.00			20.19		
Approach LOS	C			D			B			C		
d_I, Intersection Delay [s/veh]	21.09											
Intersection LOS	C											
Intersection V/C	0.723											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	853	66	101	815	157	53	444	185	72	685	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	853	66	101	815	157	53	444	185	72	685	70
Peak Hour Factor	0.9053	0.9053	0.9053	0.9623	0.9623	0.9623	0.9447	0.9447	0.9447	0.9117	0.9117	0.9117
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	236	18	26	212	41	14	117	49	20	188	19
Total Analysis Volume [veh/h]	33	942	73	105	847	163	56	470	196	79	751	77
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	47			85			41			78		
Bicycle Volume [bicycles/h]	6			4			5			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	86.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	21	54	0	14	47	0	17	37	0	15	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	63	63	73	65	65	38	28	28	38	29	29
g / C, Green / Cycle	0.61	0.53	0.53	0.61	0.54	0.54	0.32	0.23	0.23	0.32	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.05	0.27	0.27	0.15	0.27	0.28	0.06	0.18	0.20	0.08	0.22	0.23
s, saturation flow rate [veh/h]	670	1900	1840	693	1900	1756	879	1900	1569	998	1900	1807
c, Capacity [veh/h]	390	1000	969	406	1024	947	221	445	367	256	462	439
d1, Uniform Delay [s]	11.72	18.43	18.47	12.40	17.52	17.67	32.02	43.10	44.08	31.70	44.13	44.35
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.09	0.14	0.04	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.43	1.88	1.97	1.54	1.79	2.03	0.22	2.52	7.57	0.25	11.03	13.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

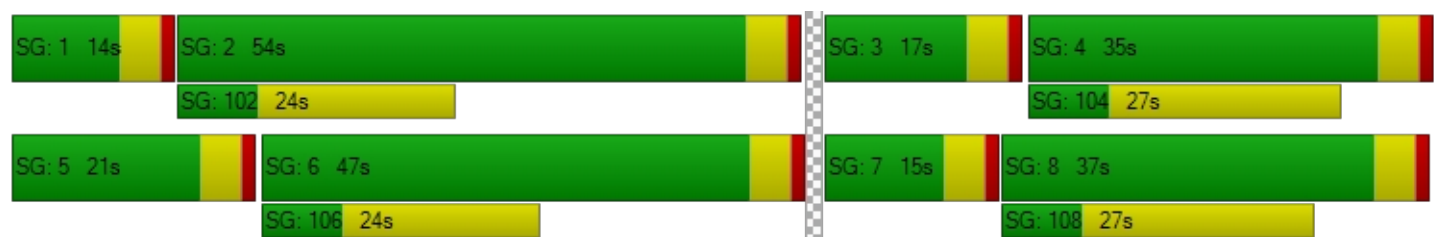
X, volume / capacity	0.08	0.51	0.52	0.26	0.51	0.52	0.25	0.79	0.86	0.31	0.91	0.93
d, Delay for Lane Group [s/veh]	12.15	20.31	20.44	13.94	19.31	19.70	32.24	45.62	51.65	31.95	55.16	58.10
Lane Group LOS	B	C	C	B	B	B	C	D	D	C	E	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.39	9.59	9.40	1.31	9.40	9.02	1.16	9.99	9.76	1.66	13.48	13.42
50th-Percentile Queue Length [ft]	9.76	239.83	234.90	32.87	235.10	225.48	29.05	249.86	243.99	41.48	337.11	335.43
95th-Percentile Queue Length [veh]	0.70	14.67	14.42	2.37	14.43	13.94	2.09	15.18	14.88	2.99	19.51	19.42
95th-Percentile Queue Length [ft]	17.57	366.82	360.58	59.17	360.84	348.61	52.28	379.47	372.07	74.67	487.66	485.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.15	20.37	20.44	13.94	19.46	19.70	32.24	47.17	51.65	31.95	56.46	58.10
Movement LOS	B	C	C	B	B	B	C	D	D	C	E	E
d_A, Approach Delay [s/veh]	20.12			18.98			47.23			54.46		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	33.16											
Intersection LOS	C											
Intersection V/C	0.547											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	10	507	140	35	309	90	90	421	340	72	683	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	507	140	35	309	90	90	421	340	72	683	50
Peak Hour Factor	0.9167	0.9167	0.9167	0.9713	0.9713	0.9713	0.9201	0.9201	0.9201	0.9216	0.9216	0.9216
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	138	38	9	80	23	24	114	92	20	185	14
Total Analysis Volume [veh/h]	11	553	153	36	318	93	98	458	370	78	741	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			37			26			30		
Bicycle Volume [bicycles/h]	3			4			23			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	0	38	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.01	0.29	0.10	0.04	0.17	0.06	0.14	0.24	0.25	0.12	0.21	0.21
s, saturation flow rate [veh/h]	1071	1900	1569	867	1900	1564	687	1900	1535	669	1900	1830
c, Capacity [veh/h]	489	953	787	322	953	785	227	697	563	202	697	671
d1, Uniform Delay [s]	14.45	12.25	9.62	20.39	10.43	9.23	27.40	18.32	18.64	28.73	17.77	17.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.07	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	2.58	0.55	0.70	0.94	0.31	0.48	0.40	0.93	0.45	0.28	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.02	0.58	0.19	0.11	0.33	0.12	0.43	0.64	0.68	0.39	0.58	0.58
d, Delay for Lane Group [s/veh]	14.54	14.83	10.17	21.09	11.37	9.54	27.88	18.72	19.58	29.18	18.06	18.14
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.11	5.80	1.23	0.49	2.76	0.72	1.52	5.58	4.93	1.23	4.87	4.77
50th-Percentile Queue Length [ft]	2.87	145.00	30.82	12.28	68.89	17.90	38.07	139.58	123.30	30.83	121.66	119.31
95th-Percentile Queue Length [veh]	0.21	9.75	2.22	0.88	4.96	1.29	2.74	9.46	8.57	2.22	8.48	8.36
95th-Percentile Queue Length [ft]	5.17	243.74	55.48	22.10	123.99	32.22	68.52	236.45	214.36	55.50	212.10	208.88

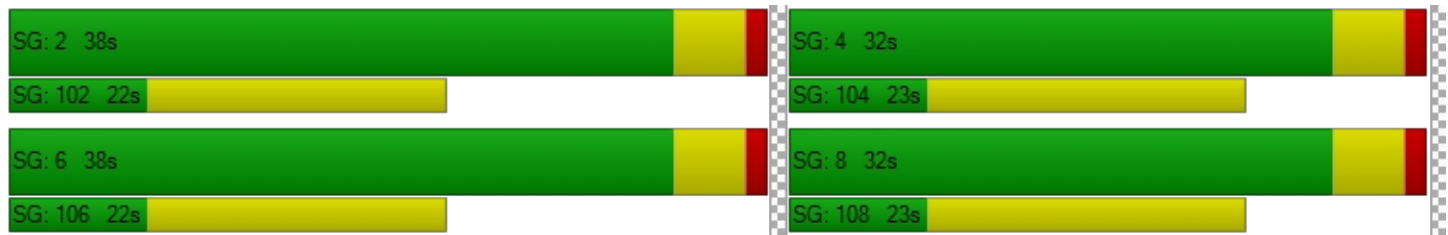


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.54	14.83	10.17	21.09	11.37	9.54	27.88	18.74	19.58	29.18	18.09	18.14
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.83			11.77			20.04			19.09		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	17.01											
Intersection LOS	B											
Intersection V/C	0.539											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.601

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	100	390	70	60	540	250	80	599	340	210	526	160
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	390	70	60	540	250	80	599	340	210	526	160
Peak Hour Factor	0.9028	0.9028	0.9028	0.7757	0.7757	0.7757	0.9132	0.9132	0.9132	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	108	19	19	174	81	22	164	93	60	151	46
Total Analysis Volume [veh/h]	111	432	78	77	696	322	88	656	372	242	606	184
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			34			42			40		
Bicycle Volume [bicycles/h]	3			10			5			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	30	30	30	30	30	30
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.20	0.12	0.05	0.08	0.28	0.29	0.13	0.18	0.24	0.31	0.22	0.22
s, saturation flow rate [veh/h]	561	3618	1547	959	1900	1646	695	3618	1554	784	1900	1719
c, Capacity [veh/h]	207	1570	672	419	825	715	278	1570	675	323	825	746
d1, Uniform Delay [s]	28.90	12.69	11.77	17.07	15.58	15.79	22.36	13.65	14.69	25.98	14.26	14.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.05	0.18	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.66	0.43	0.35	0.96	3.97	5.02	0.24	0.07	0.30	5.71	0.17	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

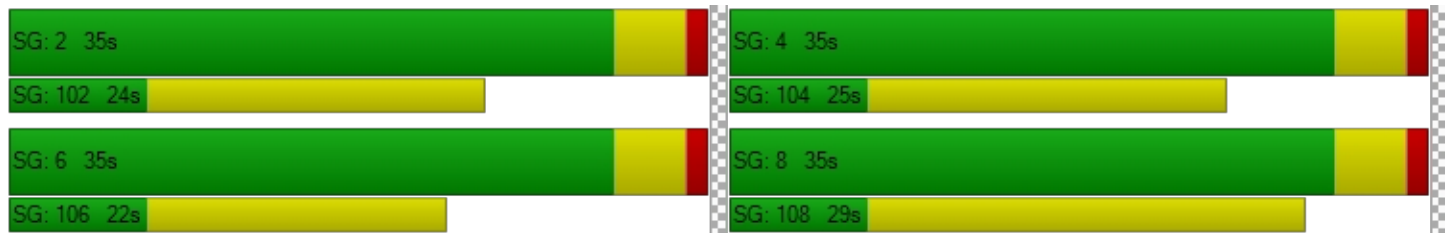
X, volume / capacity	0.54	0.28	0.12	0.18	0.65	0.67	0.32	0.42	0.55	0.75	0.50	0.51
d, Delay for Lane Group [s/veh]	38.56	13.13	12.12	18.04	19.55	20.81	22.60	13.72	14.99	31.68	14.44	14.54
Lane Group LOS	D	B	B	B	B	C	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.38	2.14	0.75	0.96	6.97	6.50	1.19	3.26	4.02	4.39	4.29	3.98
50th-Percentile Queue Length [ft]	59.42	53.44	18.74	24.02	174.35	162.57	29.77	81.51	100.46	109.72	107.28	99.46
95th-Percentile Queue Length [veh]	4.28	3.85	1.35	1.73	11.31	10.68	2.14	5.87	7.23	7.82	7.69	7.16
95th-Percentile Queue Length [ft]	106.96	96.19	33.74	43.24	282.63	267.12	53.59	146.72	180.82	195.61	192.21	179.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	38.56	13.13	12.12	18.04	19.84	20.81	22.60	13.72	14.99	31.68	14.47	14.54
Movement LOS	D	B	B	B	B	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.55			20.00			14.84			18.52		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.72											
Intersection LOS	B											
Intersection V/C	0.601											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	47.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.819

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	100	690	50	270	800	20	160	919	340	262	445	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	690	50	270	800	20	160	919	340	262	445	40
Peak Hour Factor	0.9423	0.9423	0.9423	0.9264	0.9264	0.9264	0.8571	0.8571	0.8571	0.8951	0.8951	0.8951
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	183	13	73	216	5	47	268	99	73	124	11
Total Analysis Volume [veh/h]	106	732	53	291	864	22	187	1072	397	293	497	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			25			17			21		
Bicycle Volume [bicycles/h]	6			8			12			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	30	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	38	0	12	37	0	46	58	0	12	24	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	42	30	30	42	30	30	69	53	53	69	56	56
g / C, Green / Cycle	0.35	0.25	0.25	0.35	0.25	0.25	0.57	0.45	0.45	0.57	0.47	0.47
(v / s)_i Volume / Saturation Flow Rate	0.12	0.21	0.21	0.17	0.23	0.23	0.18	0.40	0.42	0.46	0.14	0.15
s, saturation flow rate [veh/h]	912	1900	1844	1763	1900	1879	1024	1900	1695	643	1900	1837
c, Capacity [veh/h]	263	471	457	621	481	476	592	846	755	308	884	854
d1, Uniform Delay [s]	30.81	42.93	43.01	30.20	43.70	43.74	12.98	30.60	32.02	40.81	20.08	20.10
k, delay calibration	0.04	0.22	0.23	0.14	0.30	0.30	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.37	8.26	8.92	0.71	17.72	18.34	0.11	13.47	22.58	40.41	0.92	0.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.84	0.85	0.47	0.92	0.93	0.32	0.89	0.95	0.95	0.31	0.31
d, Delay for Lane Group [s/veh]	31.18	51.20	51.92	30.91	61.42	62.08	13.09	44.06	54.60	81.21	21.00	21.05
Lane Group LOS	C	D	D	C	E	E	B	D	D	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.30	12.90	12.69	7.12	15.94	15.89	2.40	22.61	24.12	7.44	5.02	4.89
50th-Percentile Queue Length [ft]	57.50	322.43	317.27	177.99	398.45	397.28	59.88	565.25	603.11	185.97	125.61	122.35
95th-Percentile Queue Length [veh]	4.14	18.79	18.53	11.50	22.49	22.43	4.31	30.41	32.18	11.91	8.70	8.52
95th-Percentile Queue Length [ft]	103.51	469.67	463.33	287.39	562.13	560.72	107.79	760.21	804.49	297.79	217.51	213.05

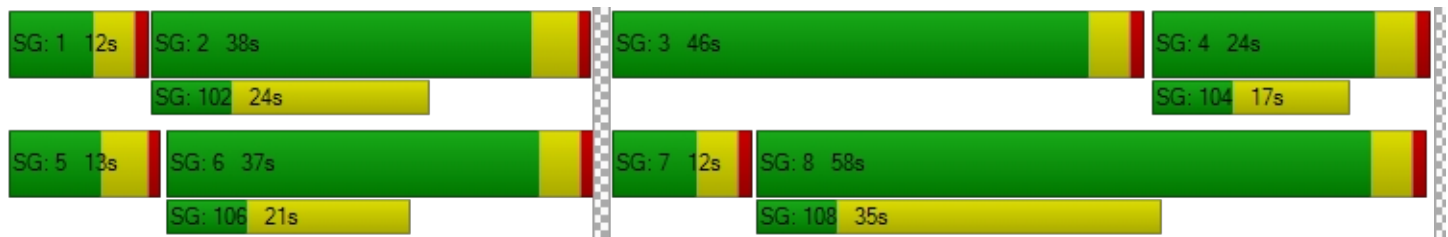


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.18	51.53	51.92	30.91	61.74	62.08	13.09	47.21	54.60	81.21	21.02	21.05
Movement LOS	C	D	D	C	E	E	B	D	D	F	C	C
d_A, Approach Delay [s/veh]	49.13			54.12			45.13			42.15		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	47.69											
Intersection LOS	D											
Intersection V/C	0.819											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	31.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	772	130	0	858	258	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	772	130	0	858	258	0
Peak Hour Factor	0.9294	0.9294	1.0000	0.8858	0.7936	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	208	35	0	242	81	0
Total Analysis Volume [veh/h]	831	140	0	969	325	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10		0		0	
Bicycle Volume [bicycles/h]	7		1		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	55	55
g / C, Green / Cycle	0.28	0.28	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.27	0.28	0.27	0.09
s, saturation flow rate [veh/h]	1810	1749	3618	3618
c, Capacity [veh/h]	511	493	2226	2226
d1, Uniform Delay [s]	31.62	32.02	9.07	7.30
k, delay calibration	0.37	0.40	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.22	32.41	0.62	0.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

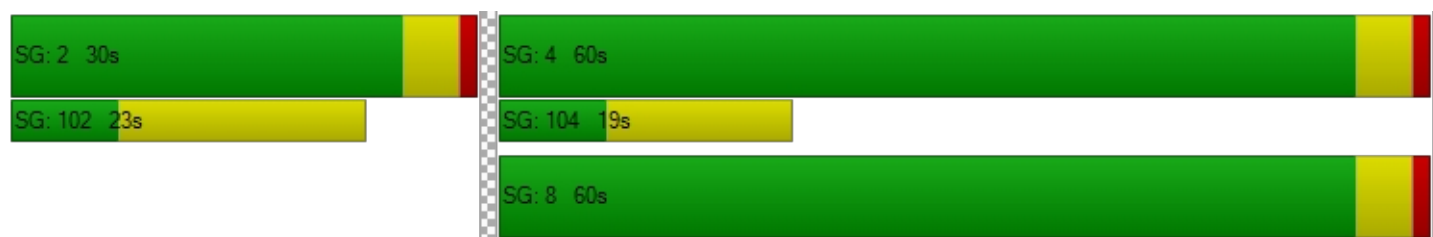
X, volume / capacity	0.95	0.98	0.44	0.15
d, Delay for Lane Group [s/veh]	55.84	64.43	9.70	7.44
Lane Group LOS	E	E	A	A
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	12.66	13.79	4.64	1.24
50th-Percentile Queue Length [ft]	316.57	344.63	115.96	31.06
95th-Percentile Queue Length [veh]	18.50	19.87	8.17	2.24
95th-Percentile Queue Length [ft]	462.47	496.85	204.26	55.90

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.41	64.43	0.00	9.70	7.44	0.00
Movement LOS	E	E		A	A	
d_A, Approach Delay [s/veh]	60.13		9.70		7.44	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	30.99					
Intersection LOS	C					
Intersection V/C	0.545					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.372

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	50	70	10	50	20	30	868	10	7	358	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	50	70	10	50	20	30	868	10	7	358	30
Peak Hour Factor	0.9524	0.9524	0.9524	0.8226	0.8226	0.8226	0.8613	0.8613	0.8613	0.9102	0.8333	0.8333
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	13	18	3	15	6	9	252	3	2	107	9
Total Analysis Volume [veh/h]	42	53	74	12	61	24	35	1008	12	8	430	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			15			26			9		
Bicycle Volume [bicycles/h]	5			6			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	67	67	67	67	67
g / C, Green / Cycle	0.16	0.16	0.74	0.74	0.74	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.10	0.05	0.04	0.27	0.27	0.12	0.13
s, saturation flow rate [veh/h]	1639	1777	940	1900	1890	1900	1841
c, Capacity [veh/h]	309	325	715	1406	1399	1406	1362
d1, Uniform Delay [s]	35.35	33.70	4.93	4.16	4.16	3.47	3.48
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.57	0.19	0.13	0.73	0.73	0.25	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.55	0.30	0.05	0.36	0.36	0.17	0.17
d, Delay for Lane Group [s/veh]	35.92	33.89	5.06	4.89	4.90	3.72	3.75
Lane Group LOS	D	C	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	3.41	1.86	0.22	2.81	2.80	1.06	1.07
50th-Percentile Queue Length [ft]	85.19	46.39	5.40	70.28	70.05	26.48	26.68
95th-Percentile Queue Length [veh]	6.13	3.34	0.39	5.06	5.04	1.91	1.92
95th-Percentile Queue Length [ft]	153.35	83.50	9.72	126.51	126.10	47.66	48.02

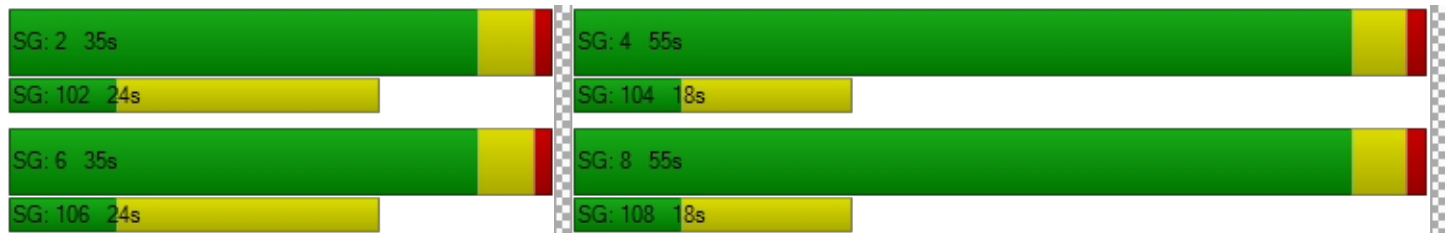


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.92	35.92	35.92	33.89	33.89	33.89	5.06	4.89	4.90	0.00	3.74	3.75
Movement LOS	D	D	D	C	C	C	A	A	A		A	A
d_A, Approach Delay [s/veh]	35.92			33.89			4.90			3.74		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	9.10											
Intersection LOS	A											
Intersection V/C	0.372											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.610

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	630	40	70	750	280	77	348	60	240	168	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	630	40	70	750	280	77	348	60	240	168	40
Peak Hour Factor	0.8249	0.8249	0.8249	0.9336	0.9336	0.9336	0.8699	0.8699	0.8699	0.8830	0.8830	0.8830
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	191	12	19	201	75	22	100	17	68	48	11
Total Analysis Volume [veh/h]	109	764	48	75	803	300	89	400	69	272	190	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	62			47			74			136		
Bicycle Volume [bicycles/h]	9			16			8			27		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	30	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	30	0	12	30	0	0	30	0	18	48	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	36	36	44	35	35	21	21	21	37	37	46
g / C, Green / Cycle	0.49	0.40	0.40	0.49	0.39	0.39	0.23	0.23	0.23	0.41	0.41	0.51
(v / s)_j Volume / Saturation Flow Rate	0.15	0.22	0.22	0.09	0.30	0.33	0.08	0.13	0.13	0.21	0.10	0.03
s, saturation flow rate [veh/h]	734	1900	1827	838	1900	1590	1162	1900	1754	1274	1900	1520
c, Capacity [veh/h]	319	759	730	412	732	613	243	435	402	531	777	779
d1, Uniform Delay [s]	17.97	20.72	20.83	13.79	24.44	25.44	36.04	30.64	30.81	19.41	17.50	11.04
k, delay calibration	0.50	0.50	0.50	0.04	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.91	2.75	2.97	0.08	8.38	14.53	0.34	0.40	0.48	0.29	0.06	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

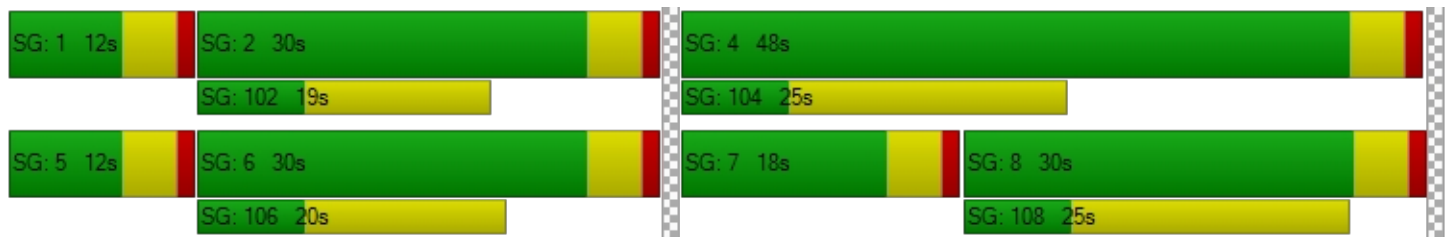
X, volume / capacity	0.34	0.54	0.55	0.18	0.79	0.86	0.37	0.55	0.57	0.51	0.24	0.06
d, Delay for Lane Group [s/veh]	20.88	23.47	23.80	13.86	32.83	39.97	36.38	31.05	31.29	19.70	17.56	11.05
Lane Group LOS	C	C	C	B	C	D	D	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.38	6.80	6.72	0.76	11.84	12.10	1.80	4.48	4.33	3.86	2.53	0.44
50th-Percentile Queue Length [ft]	34.42	169.92	168.08	19.10	295.98	302.42	44.91	112.09	108.18	96.50	63.27	10.89
95th-Percentile Queue Length [veh]	2.48	11.07	10.98	1.38	17.48	17.80	3.23	7.96	7.74	6.95	4.56	0.78
95th-Percentile Queue Length [ft]	61.96	276.81	274.39	34.39	437.06	445.02	80.84	198.91	193.47	173.71	113.89	19.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.88	23.63	23.80	13.86	34.84	39.97	36.38	31.14	31.29	19.70	17.56	11.05
Movement LOS	C	C	C	B	C	D	D	C	C	B	B	B
d_A, Approach Delay [s/veh]	23.31			34.81			32.00			18.13		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	28.29											
Intersection LOS	C											
Intersection V/C	0.610											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	30	1014	61	71	1154	20	73	62	59	30	163	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1014	61	71	1154	20	73	62	59	30	163	30
Peak Hour Factor	0.9410	0.9410	0.9410	0.9065	0.9065	0.9065	0.8000	0.8000	0.8000	0.7833	0.7833	0.7833
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	269	16	20	318	6	23	19	18	10	52	10
Total Analysis Volume [veh/h]	32	1078	65	78	1273	22	91	78	74	38	208	38
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	14			10			25			30		
Bicycle Volume [bicycles/h]	2			0			1			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	20	20
g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.64	0.64	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.07	0.30	0.31	0.16	0.34	0.34	0.21	0.17
s, saturation flow rate [veh/h]	432	1900	1852	499	1900	1887	1179	1685
c, Capacity [veh/h]	278	1214	1184	321	1214	1206	352	465
d1, Uniform Delay [s]	13.79	7.48	7.50	13.66	7.91	7.92	28.47	26.97
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.33	1.39	1.79	1.69	1.71	0.91	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.12	0.48	0.48	0.24	0.53	0.54	0.69	0.61
d, Delay for Lane Group [s/veh]	14.63	8.81	8.88	15.44	9.60	9.62	29.39	27.45
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.39	4.52	4.46	0.97	5.41	5.40	4.37	4.67
50th-Percentile Queue Length [ft]	9.79	113.04	111.52	24.37	135.35	134.93	109.19	116.69
95th-Percentile Queue Length [veh]	0.70	8.01	7.92	1.75	9.23	9.21	7.80	8.21
95th-Percentile Queue Length [ft]	17.61	200.22	198.11	43.87	230.75	230.18	194.88	205.26

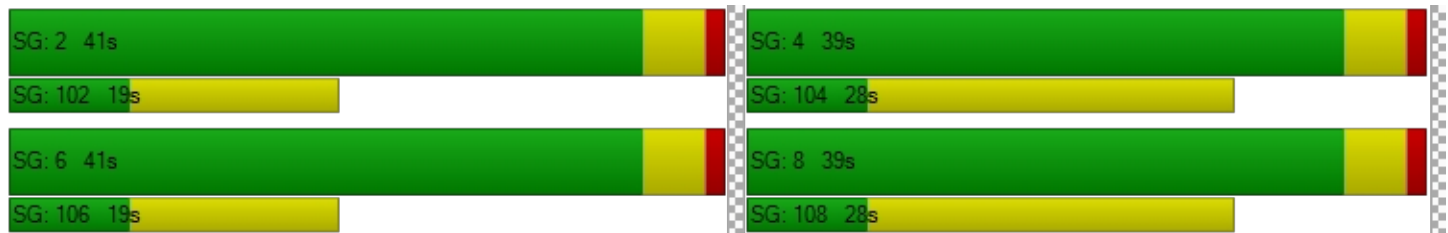


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.63	8.85	8.88	15.44	9.61	9.62	29.39	29.39	29.39	27.45	27.45	27.45
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.00			9.94			29.39			27.45		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	12.74											
Intersection LOS	B											
Intersection V/C	0.548											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.652

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵		
Turning Movement	Left	Right	Right	Left	Thru	Right	Left	Thru	Right	Left2	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	123	1104	40	20	1561	89	237	10	208
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	123	1104	40	20	1561	89	237	10	208
Peak Hour Factor	1.0000	1.0000	1.0000	0.9666	0.9666	0.9666	0.9208	0.9208	0.9208	0.8161	0.8161	0.8161
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	32	286	10	5	424	24	73	3	64
Total Analysis Volume [veh/h]	0	0	0	127	1142	41	22	1695	97	290	12	255
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			21			17			0		
Bicycle Volume [bicycles/h]	0			3			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	102.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0	
Auxiliary Signal Groups													
Lead / Lag	-	-	-	-	-	-	-	-	-	-	Lag	-	
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0	
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0	
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	88	88	88	88	88	88	23	23
g / C, Green / Cycle	0.74	0.74	0.74	0.74	0.74	0.74	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.47	0.31	0.31	0.05	0.47	0.48	0.17	0.16
s, saturation flow rate [veh/h]	268	1900	1869	481	1900	1859	1762	1561
c, Capacity [veh/h]	187	1398	1375	347	1398	1368	330	292
d1, Uniform Delay [s]	31.44	6.08	6.10	10.25	7.92	8.04	47.74	47.29
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.01	0.95	0.97	0.35	2.28	2.44	15.76	11.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.68	0.43	0.43	0.06	0.64	0.65	0.92	0.87
d, Delay for Lane Group [s/veh]	49.45	7.03	7.07	10.60	10.20	10.48	63.50	58.61
Lane Group LOS	D	A	A	B	B	B	E	E
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.47	5.50	5.46	0.28	11.36	11.51	10.17	8.22
50th-Percentile Queue Length [ft]	111.67	137.41	136.47	7.07	284.03	287.86	254.25	205.41
95th-Percentile Queue Length [veh]	7.93	9.34	9.29	0.51	16.89	17.08	15.40	12.92
95th-Percentile Queue Length [ft]	198.32	233.53	232.26	12.73	422.22	426.98	385.00	322.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	49.45	7.05	7.07	10.60	10.33	10.48	63.50	63.50	58.61
Movement LOS				D	A	A	B	B	B	E	E	E
d_A, Approach Delay [s/veh]	0.00			11.16			10.35			61.27		
Approach LOS	A			B			B			E		
d_I, Intersection Delay [s/veh]	18.34											
Intersection LOS	B											
Intersection V/C	0.652											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	890	60	121	980	20	230	10	233	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	890	60	121	980	20	230	10	233	10	10	10
Peak Hour Factor	0.9321	0.9321	0.9321	0.9721	0.9721	0.9721	0.8917	0.8917	0.8917	0.6389	0.6389	0.6389
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	239	16	31	252	5	64	3	65	4	4	4
Total Analysis Volume [veh/h]	11	955	64	124	1008	21	258	11	261	16	16	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			0			57			40		
Bicycle Volume [bicycles/h]	2			0			9			25		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	67	67	79	79	79	22	22	6
g / C, Green / Cycle	0.56	0.56	0.66	0.66	0.66	0.18	0.18	0.05
(v / s)_j Volume / Saturation Flow Rate	0.29	0.29	0.17	0.27	0.27	0.15	0.17	0.03
s, saturation flow rate [veh/h]	1865	1671	713	1900	1884	1813	1578	1767
c, Capacity [veh/h]	1073	934	452	1245	1234	332	289	83
d1, Uniform Delay [s]	16.28	16.48	10.37	9.79	9.79	47.01	47.97	56.01
k, delay calibration	0.50	0.50	0.41	0.50	0.50	0.04	0.09	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	2.10	1.24	1.02	1.03	1.83	8.86	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.50	0.52	0.27	0.41	0.42	0.81	0.90	0.58
d, Delay for Lane Group [s/veh]	17.97	18.58	11.61	10.81	10.83	48.85	56.84	58.39
Lane Group LOS	B	B	B	B	B	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	9.24	8.56	1.27	6.29	6.26	7.93	8.39	1.47
50th-Percentile Queue Length [ft]	231.01	214.05	31.78	157.30	156.39	198.22	209.83	36.72
95th-Percentile Queue Length [veh]	14.23	13.36	2.29	10.41	10.36	12.55	13.14	2.64
95th-Percentile Queue Length [ft]	355.64	334.02	57.21	260.14	258.94	313.66	328.61	66.10

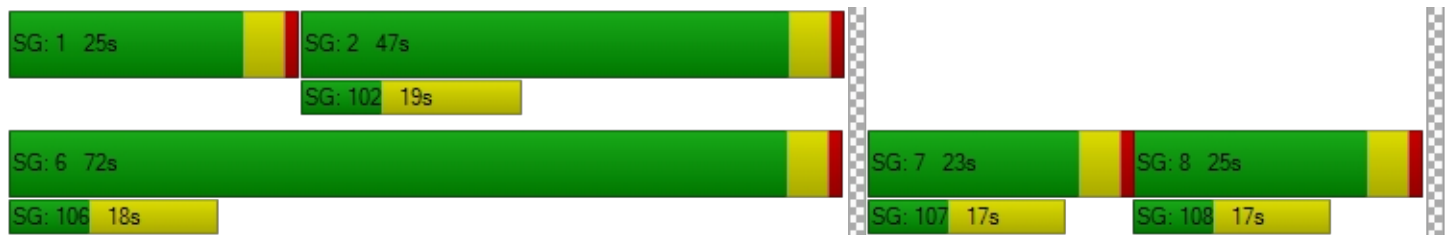


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.97	18.24	18.58	11.61	10.82	10.83	48.85	48.85	56.84	58.39	58.39	58.39
Movement LOS	B	B	B	B	B	B	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	18.26			10.90			52.78			58.39		
Approach LOS	B			B			D			E		
d_I, Intersection Delay [s/veh]	22.51											
Intersection LOS	C											
Intersection V/C	0.515											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	46.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└┌			└┌			└┌┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	570	60	125	700	10	160	435	220	0	181	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	570	60	125	700	10	160	435	220	0	181	40
Peak Hour Factor	1.0000	0.9657	0.9657	0.9163	0.9163	0.9163	0.9517	0.9517	0.9517	0.9353	0.9353	0.9353
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	148	16	34	191	3	42	114	58	0	48	11
Total Analysis Volume [veh/h]	0	590	62	136	764	11	168	457	231	0	194	43
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	3			0			25			15		
Bicycle Volume [bicycles/h]	5			4			10			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	5	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	50	50	30	30	30	30	30
g / C, Green / Cycle	0.45	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.35	0.14	0.41	0.14	0.39	0.00	0.10	0.03
s, saturation flow rate [veh/h]	1858	949	1894	1206	1781	766	1900	1560
c, Capacity [veh/h]	839	414	1061	368	601	80	641	526
d1, Uniform Delay [s]	20.82	14.29	14.72	30.31	29.80	0.00	21.99	20.31
k, delay calibration	0.50	0.25	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.98	1.07	4.43	0.33	83.64	0.00	0.10	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

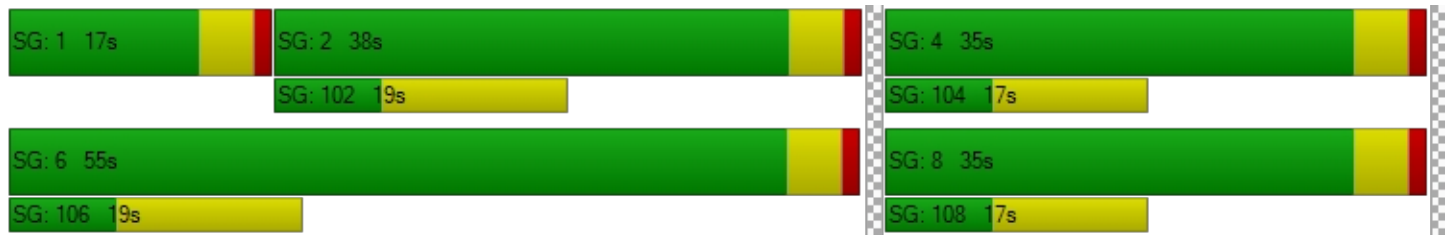
X, volume / capacity	0.78	0.33	0.73	0.46	1.14	0.00	0.30	0.08
d, Delay for Lane Group [s/veh]	27.80	15.37	19.14	30.64	113.44	0.00	22.09	20.33
Lane Group LOS	C	B	B	C	F	A	C	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	12.26	1.25	11.35	3.19	26.36	0.00	3.02	0.62
50th-Percentile Queue Length [ft]	306.52	31.23	283.68	79.63	659.02	0.00	75.50	15.45
95th-Percentile Queue Length [veh]	18.00	2.25	16.87	5.73	37.91	0.00	5.44	1.11
95th-Percentile Queue Length [ft]	450.08	56.22	421.79	143.33	947.79	0.00	135.91	27.82

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	27.80	27.80	15.37	19.14	19.14	30.64	113.44	113.44	0.00	22.09	20.33
Movement LOS		C	C	B	B	B	C	F	F	A	C	C
d_A, Approach Delay [s/veh]	27.80			18.58			97.19			21.77		
Approach LOS	C			B			F			C		
d_I, Intersection Delay [s/veh]	46.46											
Intersection LOS	D											
Intersection V/C	0.795											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	5.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	587	474	10	20	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	587	474	10	20	20
Peak Hour Factor	0.9161	0.9161	0.9512	0.9512	0.5526	0.5526
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	160	125	3	9	9
Total Analysis Volume [veh/h]	22	641	498	11	36	36
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	234		0		63	
Bicycle Volume [bicycles/h]	0		1		2	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	21	21	21	21
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	9	9	2
g / C, Green / Cycle	0.44	0.44	0.44	0.12
(v / s)_j Volume / Saturation Flow Rate	0.02	0.34	0.27	0.04
s, saturation flow rate [veh/h]	884	1900	1888	1707
c, Capacity [veh/h]	471	826	821	207
d1, Uniform Delay [s]	7.86	5.00	4.53	8.35
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.60	0.29	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.05	0.78	0.62	0.35
d, Delay for Lane Group [s/veh]	7.88	5.60	4.82	8.72
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.70	0.47	0.17
50th-Percentile Queue Length [ft]	1.33	17.40	11.68	4.20
95th-Percentile Queue Length [veh]	0.10	1.25	0.84	0.30
95th-Percentile Queue Length [ft]	2.40	31.32	21.02	7.56

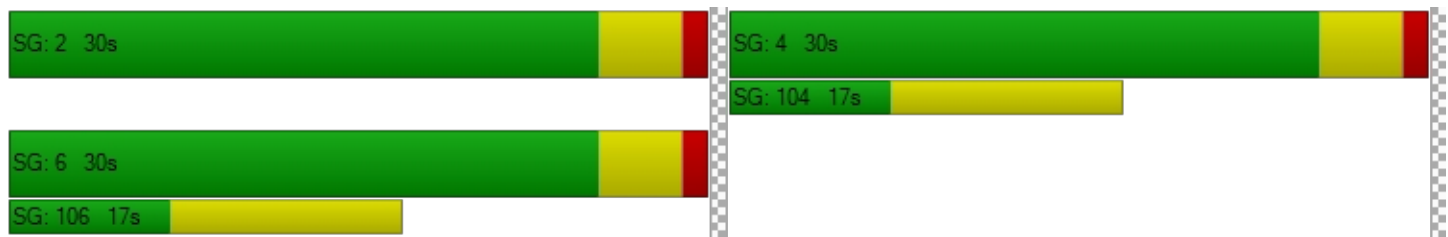


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.88	5.60	4.82	4.82	8.72	8.72
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.68		4.82		8.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.50					
Intersection LOS	A					
Intersection V/C	0.380					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	840	491	100	1168	632	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	840	491	100	1168	632	95
Peak Hour Factor	0.9489	0.9489	0.9223	0.9223	0.9361	0.9361
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	221	129	27	317	169	25
Total Analysis Volume [veh/h]	885	517	108	1266	675	101
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		53		33	
Bicycle Volume [bicycles/h]	1		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	72	72	9	85	25	25
g / C, Green / Cycle	0.60	0.60	0.07	0.71	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.37	0.43	0.06	0.35	0.19	0.07
s, saturation flow rate [veh/h]	1900	1644	1810	3618	3514	1494
c, Capacity [veh/h]	1139	985	134	2574	744	316
d1, Uniform Delay [s]	15.25	16.77	54.68	7.67	46.10	39.94
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.49	4.36	4.36	0.67	1.82	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.62	0.71	0.81	0.49	0.91	0.32
d, Delay for Lane Group [s/veh]	17.74	21.13	59.04	8.35	47.92	40.16
Lane Group LOS	B	C	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	12.68	14.27	3.37	6.80	9.95	2.55
50th-Percentile Queue Length [ft]	316.89	356.71	84.36	170.00	248.74	63.75
95th-Percentile Queue Length [veh]	18.51	20.46	6.07	11.08	15.12	4.59
95th-Percentile Queue Length [ft]	462.86	511.58	151.84	276.92	378.07	114.76

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.44	21.13	59.04	8.35	47.92	40.16
Movement LOS	B	C	E	A	D	D
d_A, Approach Delay [s/veh]	19.43		12.33		46.91	
Approach LOS	B		B		D	
d_I, Intersection Delay [s/veh]	22.69					
Intersection LOS	C					
Intersection V/C	0.678					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	63	352	155	70	315	84	486	466	40	60	696	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	352	155	70	315	84	486	466	40	60	696	10
Peak Hour Factor	0.9279	0.9279	0.9279	0.8786	0.8786	0.8786	0.9699	0.9699	0.9699	0.9334	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	95	42	20	90	24	125	120	10	16	186	3
Total Analysis Volume [veh/h]	68	379	167	80	359	96	501	480	41	64	746	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	54			51			67			36		
Bicycle Volume [bicycles/h]	1			2			22			24		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	25	0	0	25	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	30	30	30	30	30	30	31	31	31	19	19	19
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.07	0.20	0.11	0.08	0.19	0.06	0.47	0.14	0.14	0.07	0.20	0.20
s, saturation flow rate [veh/h]	1028	1900	1520	1002	1900	1554	1076	1900	1814	869	1900	1879
c, Capacity [veh/h]	374	812	650	358	812	664	494	839	801	229	510	505
d1, Uniform Delay [s]	20.37	14.40	12.95	21.22	14.21	12.28	28.09	12.71	12.75	27.68	23.49	23.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	1.93	0.96	1.44	1.75	0.46	44.14	0.08	0.09	0.24	0.82	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.47	0.26	0.22	0.44	0.14	1.01	0.31	0.32	0.28	0.74	0.75
d, Delay for Lane Group [s/veh]	21.44	16.32	13.90	22.66	15.96	12.74	72.23	12.79	12.84	27.93	24.30	24.37
Lane Group LOS	C	B	B	C	B	B	F	B	B	C	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.93	4.24	1.68	1.13	3.95	0.91	11.50	2.48	2.42	0.97	5.51	5.49
50th-Percentile Queue Length [ft]	23.18	105.88	41.97	28.36	98.68	22.65	287.50	61.91	60.43	24.17	137.68	137.28
95th-Percentile Queue Length [veh]	1.67	7.61	3.02	2.04	7.11	1.63	17.23	4.46	4.35	1.74	9.36	9.33
95th-Percentile Queue Length [ft]	41.72	190.26	75.54	51.05	177.63	40.76	430.73	111.44	108.78	43.51	233.89	233.35

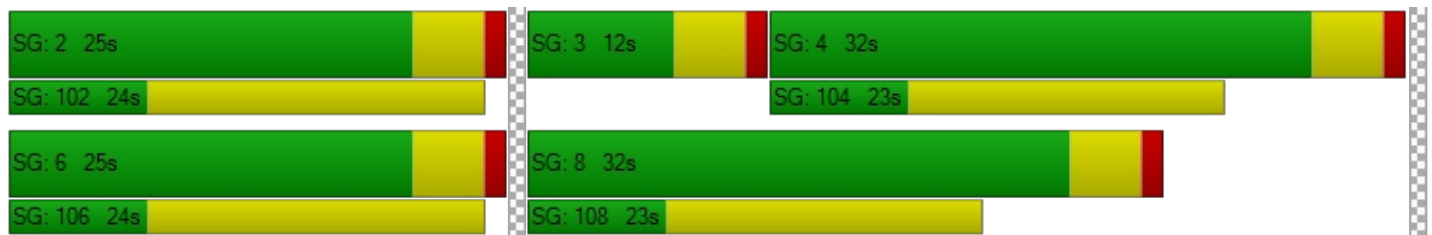


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.44	16.32	13.90	22.66	15.96	12.74	72.23	12.81	12.84	27.93	24.33	24.37
Movement LOS	C	B	B	C	B	B	F	B	B	C	C	C
d_A, Approach Delay [s/veh]	16.23			16.38			41.94			24.62		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	27.34											
Intersection LOS	C											
Intersection V/C	0.574											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	35.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	340	350	80	560	151	370	915	70	17	755	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	340	350	80	560	151	370	915	70	17	755	40
Peak Hour Factor	0.9313	0.9313	0.9313	0.8416	0.8416	0.8416	0.9812	0.9812	0.9812	0.9486	0.9486	0.9486
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	91	94	24	166	45	94	233	18	4	199	11
Total Analysis Volume [veh/h]	54	365	376	95	665	179	377	932	71	18	796	42
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			48			94			29		
Bicycle Volume [bicycles/h]	1			10			5			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	23	17	44	0	23	50	17	13	40	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	29	61	8	31	31	15	62	74	3	50	50
g / C, Green / Cycle	0.05	0.24	0.51	0.06	0.25	0.25	0.13	0.52	0.62	0.03	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.03	0.10	0.25	0.03	0.23	0.24	0.11	0.26	0.05	0.01	0.22	0.22
s, saturation flow rate [veh/h]	1810	3618	1507	2796	1900	1716	3514	3618	1556	1810	1900	1856
c, Capacity [veh/h]	88	864	763	191	484	437	445	1870	964	48	792	773
d1, Uniform Delay [s]	55.96	38.65	19.46	56.43	43.31	43.67	51.26	18.86	9.09	57.44	26.25	26.30
k, delay calibration	0.04	0.04	0.22	0.04	0.15	0.17	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.55	0.12	1.02	0.75	8.87	12.92	1.76	0.95	0.01	1.82	2.57	2.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.61	0.42	0.49	0.50	0.90	0.93	0.85	0.50	0.07	0.38	0.53	0.54
d, Delay for Lane Group [s/veh]	58.50	38.77	20.48	57.18	52.19	56.59	53.02	19.81	9.11	59.26	28.82	28.96
Lane Group LOS	E	D	C	E	D	E	D	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.67	4.58	7.01	1.44	13.68	13.26	5.65	8.54	0.73	0.56	9.57	9.43
50th-Percentile Queue Length [ft]	41.67	114.53	175.27	35.99	342.10	331.38	141.17	213.59	18.26	14.04	239.14	235.80
95th-Percentile Queue Length [veh]	3.00	8.09	11.35	2.59	19.75	19.23	9.54	13.34	1.31	1.01	14.64	14.47
95th-Percentile Queue Length [ft]	75.00	202.29	283.83	64.78	493.77	480.65	238.60	333.44	32.87	25.28	365.95	361.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.50	38.77	20.48	57.18	53.69	56.59	53.02	19.81	9.11	59.26	28.89	28.96
Movement LOS	E	D	C	E	D	E	D	B	A	E	C	C
d_A, Approach Delay [s/veh]	31.46			54.60			28.33			29.53		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	35.43											
Intersection LOS	D											
Intersection V/C	0.676											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	38.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.645

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	TTL			TTL			TTL			TTL		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	110	850	282	270	820	115	90	1320	10	149	866	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	850	282	270	820	115	90	1320	10	149	866	20
Peak Hour Factor	0.9536	0.9536	0.9536	0.8522	0.8522	0.8522	0.9234	0.9234	0.9234	0.9116	0.9116	0.9116
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	223	74	79	241	34	24	357	3	41	238	5
Total Analysis Volume [veh/h]	115	891	296	317	962	135	97	1430	11	163	950	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			41			50			31		
Bicycle Volume [bicycles/h]	3			20			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	43	0	17	45	0	17	47	0	13	43	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	33	33	13	36	36	5	48	48	8	51	51
g / C, Green / Cycle	0.08	0.27	0.27	0.11	0.30	0.30	0.04	0.40	0.40	0.06	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.20	0.09	0.27	0.09	0.03	0.26	0.26	0.05	0.18	0.18
s, saturation flow rate [veh/h]	1810	3618	1505	3514	3618	1524	3514	3618	1890	3514	3618	1872
c, Capacity [veh/h]	141	990	412	373	1093	461	151	1460	763	222	1533	793
d1, Uniform Delay [s]	54.46	41.97	39.37	52.65	39.77	32.03	56.46	28.87	28.89	55.19	24.19	24.21
k, delay calibration	0.04	0.15	0.31	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.04	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	4.58	6.55	2.12	3.50	0.50	1.68	2.24	4.25	1.78	0.07	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.90	0.72	0.85	0.88	0.29	0.64	0.65	0.65	0.74	0.42	0.42
d, Delay for Lane Group [s/veh]	58.86	46.55	45.92	54.77	43.27	32.53	58.14	31.11	33.13	56.97	24.26	24.80
Lane Group LOS	E	D	D	D	D	C	E	C	C	E	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.76	14.02	9.10	4.68	13.42	2.98	1.48	11.34	12.29	2.48	6.36	6.72
50th-Percentile Queue Length [ft]	93.91	350.48	227.39	116.93	335.59	74.45	37.06	283.41	307.31	61.92	158.90	168.08
95th-Percentile Queue Length [veh]	6.76	20.16	14.04	8.22	19.43	5.36	2.67	16.86	18.04	4.46	10.49	10.98
95th-Percentile Queue Length [ft]	169.04	504.00	351.05	205.60	485.81	134.02	66.70	421.45	451.06	111.46	262.26	274.39



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.86	46.55	45.92	54.77	43.27	32.53	58.14	31.79	33.13	56.97	24.44	24.80
Movement LOS	E	D	D	D	D	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	47.49			44.82			33.47			29.12		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	38.92											
Intersection LOS	D											
Intersection V/C	0.645											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.572

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	160	20	180	30	10	60	130	1650	70	70	1307	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	20	180	30	10	60	130	1650	70	70	1307	150
Peak Hour Factor	0.6595	0.6595	0.6595	0.8750	0.8750	0.8750	0.9911	0.9911	0.9911	0.8542	0.8542	0.8542
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	8	68	9	3	17	33	416	18	20	383	44
Total Analysis Volume [veh/h]	243	30	273	34	11	69	131	1665	71	82	1530	176
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			21			3			15		
Bicycle Volume [bicycles/h]	0			11			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	10	68	68	7	64	64
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.26	0.09	0.57	0.57	0.06	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.18	0.02	0.17	0.02	0.05	0.07	0.32	0.32	0.05	0.31	0.32
s, saturation flow rate [veh/h]	1326	1900	1609	1398	1594	1810	3618	1856	1810	3618	1797
c, Capacity [veh/h]	323	496	420	376	416	158	2050	1051	104	1942	965
d1, Uniform Delay [s]	47.18	33.27	39.44	36.83	34.48	53.85	16.48	16.51	55.78	18.75	18.79
k, delay calibration	0.11	0.04	0.07	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.67	0.02	1.15	0.10	0.22	4.26	1.11	2.17	4.93	1.30	2.63
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

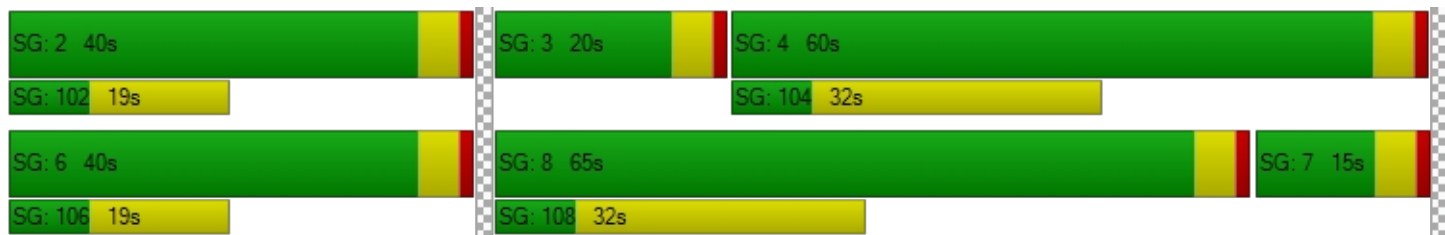
X, volume / capacity	0.75	0.06	0.65	0.09	0.19	0.83	0.56	0.56	0.79	0.59	0.59
d, Delay for Lane Group [s/veh]	50.85	33.29	40.58	36.94	34.70	58.11	17.59	18.68	60.70	20.05	21.43
Lane Group LOS	D	C	D	D	C	E	B	B	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	7.35	0.66	7.20	0.80	1.84	4.07	10.02	10.65	2.59	10.78	11.14
50th-Percentile Queue Length [ft]	183.64	16.45	180.02	20.02	45.91	101.85	250.47	266.25	64.79	269.50	278.58
95th-Percentile Queue Length [veh]	11.79	1.18	11.60	1.44	3.31	7.33	15.21	16.00	4.67	16.16	16.62
95th-Percentile Queue Length [ft]	294.76	29.60	290.04	36.03	82.63	183.33	380.25	400.05	116.63	404.11	415.44

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	50.85	33.29	40.58	36.94	34.70	34.70	58.11	17.93	18.68	60.70	20.41	21.43
Movement LOS	D	C	D	D	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	44.75			35.37			20.78			22.35		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	24.85											
Intersection LOS	C											
Intersection V/C	0.572											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	36.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.510

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	410	1364	546	0	0	1527
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	410	1364	546	0	0	1527
Peak Hour Factor	0.9558	0.9558	0.9255	1.0000	1.0000	0.9048
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	107	357	147	0	0	422
Total Analysis Volume [veh/h]	429	1427	590	0	0	1688
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17		0		0	
Bicycle Volume [bicycles/h]	17		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	40	45	35	0	0	80
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	16	0	0	0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	35	89	22	75
g / C, Green / Cycle	0.29	0.74	0.18	0.63
(v / s)_j Volume / Saturation Flow Rate	0.12	0.79	0.16	0.24
s, saturation flow rate [veh/h]	3514	1800	3618	6901
c, Capacity [veh/h]	1037	1334	660	4336
d1, Uniform Delay [s]	33.95	15.54	47.90	10.97
k, delay calibration	0.04	0.50	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	45.73	1.78	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.41	1.07	0.89	0.39
d, Delay for Lane Group [s/veh]	34.05	61.26	49.68	11.23
Lane Group LOS	C	F	D	B
Critical Lane Group	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	4.77	20.35	8.75	5.39
50th-Percentile Queue Length [ft]	119.30	508.69	218.75	134.69
95th-Percentile Queue Length [veh]	8.35	29.37	13.60	9.19
95th-Percentile Queue Length [ft]	208.87	734.31	340.02	229.86



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.05	61.26	49.68	0.00	0.00	11.23
Movement LOS	C	F	D			B
d_A, Approach Delay [s/veh]	54.97		49.68		11.23	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	36.36					
Intersection LOS	D					
Intersection V/C	0.510					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	546	270	1205	743	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	546	270	1205	743	19
Peak Hour Factor	1.0000	1.0000	0.6000	1.0000	1.0000	1.0000	1.0000	0.9023	0.9023	0.9422	0.9422	0.9420
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	17	0	0	0	0	151	75	320	197	5
Total Analysis Volume [veh/h]	0	0	67	0	0	0	0	605	299	1279	789	20
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	6			20			1			0		
Bicycle Volume [bicycles/h]	3			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	40	0	80	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		25	25	86	115	115
g / C, Green / Cycle		0.21	0.21	0.71	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.17	0.19	0.36	0.21	0.21
s, saturation flow rate [veh/h]		3618	1569	3514	1900	1883
c, Capacity [veh/h]		757	328	2509	1827	1811
d1, Uniform Delay [s]		45.01	46.31	7.71	0.11	0.11
k, delay calibration		0.04	0.13	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.75	11.59	0.74	0.28	0.29
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.80	0.91	0.51	0.22	0.22
d, Delay for Lane Group [s/veh]		45.76	57.90	8.45	0.39	0.40
Lane Group LOS		D	E	A	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		8.60	9.72	6.95	0.14	0.14
50th-Percentile Queue Length [ft]		214.97	243.02	173.70	3.55	3.59
95th-Percentile Queue Length [veh]		13.41	14.83	11.27	0.26	0.26
95th-Percentile Queue Length [ft]		335.20	370.85	281.77	6.39	6.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.76	57.90	8.45	0.39	0.40
Movement LOS								D	E	A	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			49.78			5.33		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	18.76											
Intersection LOS	B											
Intersection V/C	0.555											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	11.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	└			+								
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	13	40	40	30	50	50	30	746	28	40	713	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	40	40	30	50	50	30	746	28	40	713	0
Peak Hour Factor	0.8017	0.7927	0.7927	0.7910	0.7910	0.7910	0.9121	0.9121	0.9284	0.7921	0.7921	0.7921
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	13	13	9	16	16	8	204	8	13	225	0
Total Analysis Volume [veh/h]	16	50	50	38	63	63	33	818	30	50	900	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			28			99			13		
Bicycle Volume [bicycles/h]	3			11			1			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	70.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	90	90	90	90
g / C, Green / Cycle	0.18	0.18	0.75	0.75	0.75	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.25	0.25	0.28	0.28
s, saturation flow rate [veh/h]	1560	1380	1700	1729	1639	1729
c, Capacity [veh/h]	274	280	1303	1292	1259	1292
d1, Uniform Delay [s]	43.47	46.24	4.91	5.08	5.05	5.32
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.73	0.66	0.69	0.83	0.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.36	0.59	0.32	0.33	0.37	0.38
d, Delay for Lane Group [s/veh]	43.77	46.97	5.58	5.77	5.88	6.16
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.62	4.63	3.24	3.40	3.67	4.06
50th-Percentile Queue Length [ft]	65.58	115.83	81.03	85.00	91.71	101.43
95th-Percentile Queue Length [veh]	4.72	8.16	5.83	6.12	6.60	7.30
95th-Percentile Queue Length [ft]	118.04	204.08	145.85	153.00	165.08	182.58

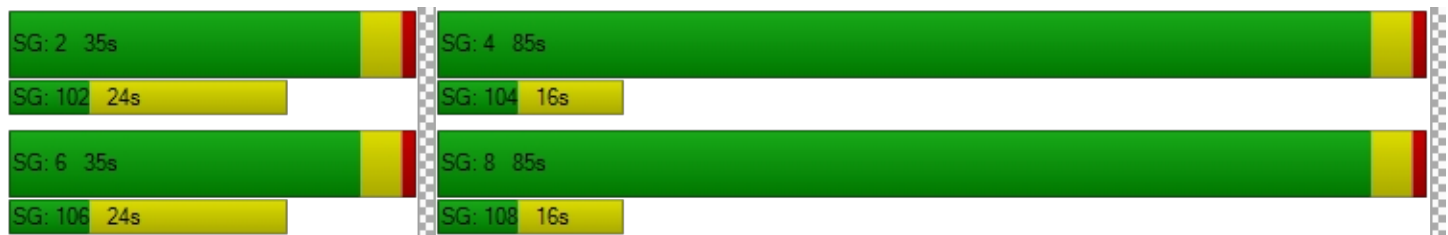


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	43.77	43.77	46.97	46.97	46.97	5.58	5.68	0.00	5.88	6.03	6.16
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]	43.77			46.97			5.67			6.03		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	10.96											
Intersection LOS	B											
Intersection V/C	0.401											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	46.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	343	760	20	20	750	110	10	291	40	136	125	351
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	343	760	20	20	750	110	10	291	40	136	125	351
Peak Hour Factor	0.9680	0.9680	0.9680	0.8860	0.8860	0.8860	0.9271	0.9271	0.9271	0.8678	0.8678	0.8678
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	196	5	6	212	31	3	78	11	39	36	101
Total Analysis Volume [veh/h]	354	785	21	23	847	124	11	314	43	157	144	404
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			43			61			36		
Bicycle Volume [bicycles/h]	6			9			8			16		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	37	65	65	3	30	30	24	24	24	39	39	80
g / C, Green / Cycle	0.31	0.54	0.54	0.02	0.25	0.25	0.20	0.20	0.20	0.32	0.32	0.67
(v / s)_i Volume / Saturation Flow Rate	0.10	0.21	0.21	0.01	0.26	0.27	0.01	0.17	0.03	0.12	0.08	0.26
s, saturation flow rate [veh/h]	3514	1900	1873	1810	1900	1782	1244	1900	1482	1315	1900	1573
c, Capacity [veh/h]	1091	1027	1013	42	482	452	222	383	299	343	610	1054
d1, Uniform Delay [s]	31.71	16.07	16.09	57.96	44.76	44.76	45.73	45.76	39.34	31.98	29.90	8.80
k, delay calibration	0.50	0.50	0.50	0.04	0.45	0.47	0.04	0.14	0.04	0.04	0.04	0.18
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	1.13	1.16	4.16	47.15	54.93	0.03	5.46	0.08	0.35	0.07	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

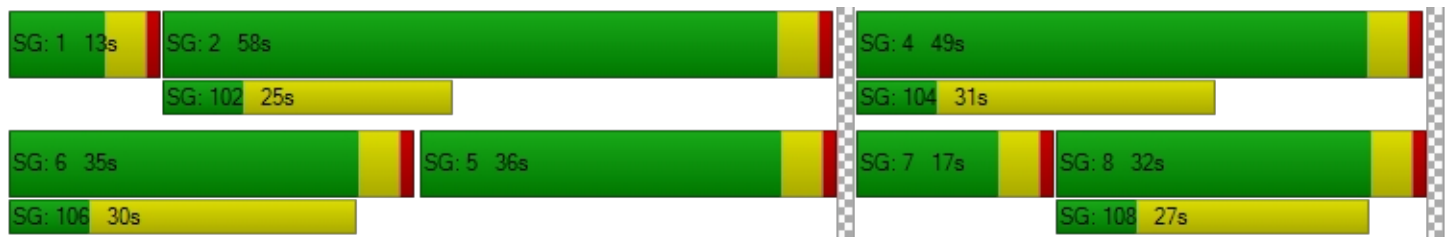
X, volume / capacity	0.32	0.39	0.40	0.55	1.03	1.05	0.05	0.82	0.14	0.46	0.24	0.38
d, Delay for Lane Group [s/veh]	32.50	17.20	17.25	62.12	91.91	99.69	45.76	51.22	39.42	32.33	29.97	9.19
Lane Group LOS	C	B	B	E	F	F	D	D	D	C	C	A
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	4.03	6.59	6.54	0.73	20.35	20.07	0.29	9.42	1.05	3.43	3.09	4.53
50th-Percentile Queue Length [ft]	100.75	164.69	163.62	18.36	508.81	501.66	7.23	235.41	26.17	85.67	77.19	113.13
95th-Percentile Queue Length [veh]	7.25	10.80	10.74	1.32	28.27	28.24	0.52	14.45	1.88	6.17	5.56	8.01
95th-Percentile Queue Length [ft]	181.36	269.93	268.51	33.05	706.79	705.99	13.01	361.22	47.11	154.21	138.94	200.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.50	17.23	17.25	62.12	95.13	99.69	45.76	51.22	39.42	32.33	29.97	9.19
Movement LOS	C	B	B	E	F	F	D	D	D	C	C	A
d_A, Approach Delay [s/veh]	21.89			94.93			49.68			18.59		
Approach LOS	C			F			D			B		
d_I, Intersection Delay [s/veh]	46.84											
Intersection LOS	D											
Intersection V/C	0.669											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.5
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	210	610	760	50	70	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	210	610	760	50	70	55
Peak Hour Factor	0.9562	0.9562	0.9631	0.9631	0.8902	0.8902
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	159	197	13	20	15
Total Analysis Volume [veh/h]	220	638	789	52	79	62
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18		0		24	
Bicycle Volume [bicycles/h]	3		0		16	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	55	43	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	74	74	64	64	7	7
g / C, Green / Cycle	0.82	0.82	0.72	0.72	0.08	0.08
(v / s)_j Volume / Saturation Flow Rate	0.27	0.34	0.42	0.03	0.04	0.04
s, saturation flow rate [veh/h]	812	1900	1900	1588	1810	1417
c, Capacity [veh/h]	637	1561	1357	1134	138	108
d1, Uniform Delay [s]	4.71	2.16	6.27	3.79	40.14	40.14
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.48	0.79	1.82	0.08	1.39	1.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.35	0.41	0.58	0.05	0.57	0.57
d, Delay for Lane Group [s/veh]	6.19	2.95	8.10	3.87	41.53	41.92
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	1.42	5.79	0.23	1.70	1.35
50th-Percentile Queue Length [ft]	13.54	35.38	144.80	5.68	42.61	33.74
95th-Percentile Queue Length [veh]	0.98	2.55	9.74	0.41	3.07	2.43
95th-Percentile Queue Length [ft]	24.38	63.69	243.47	10.23	76.70	60.73

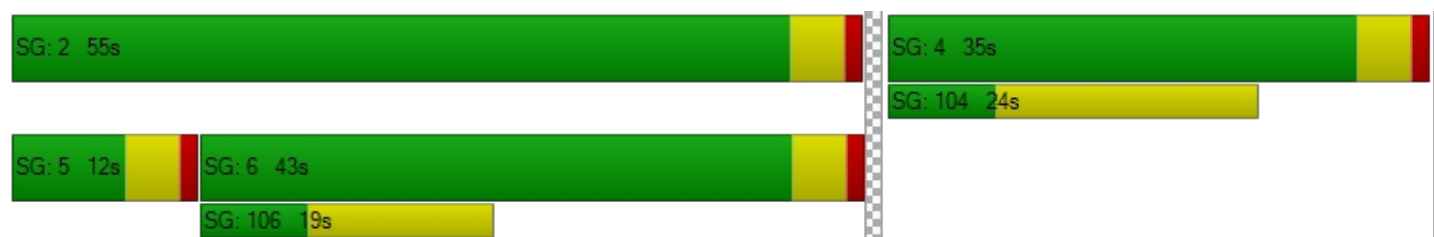


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.19	2.95	8.10	3.87	41.53	41.92
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	3.78		7.84		41.70	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.54					
Intersection LOS	A					
Intersection V/C	0.491					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	45.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	100	864	96	148	836	180	93	150	124	290	250	150
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	864	96	148	836	180	93	150	124	290	250	150
Peak Hour Factor	0.9581	0.9581	0.9581	0.9661	0.9661	0.9661	0.9362	0.9362	0.9362	0.7605	0.7605	0.7605
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	225	25	38	216	47	25	40	33	95	82	49
Total Analysis Volume [veh/h]	104	902	100	153	865	186	99	160	132	381	329	197
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9			15			43			11		
Bicycle Volume [bicycles/h]	1			2			29			19		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	Yes	Yes		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	51	51	12	31	31	13	13	13	25	25	25
g / C, Green / Cycle	0.27	0.43	0.43	0.10	0.26	0.26	0.11	0.11	0.11	0.21	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.06	0.25	0.06	0.08	0.24	0.12	0.05	0.08	0.09	0.21	0.17	0.13
s, saturation flow rate [veh/h]	1810	3618	1547	1810	3618	1544	1810	1900	1443	1810	1900	1544
c, Capacity [veh/h]	482	1535	656	182	935	399	199	209	159	383	402	327
d1, Uniform Delay [s]	34.29	26.53	21.29	53.06	43.41	37.55	50.32	51.94	52.35	47.28	45.15	42.79
k, delay calibration	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04	0.29	0.17	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	1.66	0.49	3.92	1.81	0.32	0.71	2.19	4.22	33.95	6.24	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

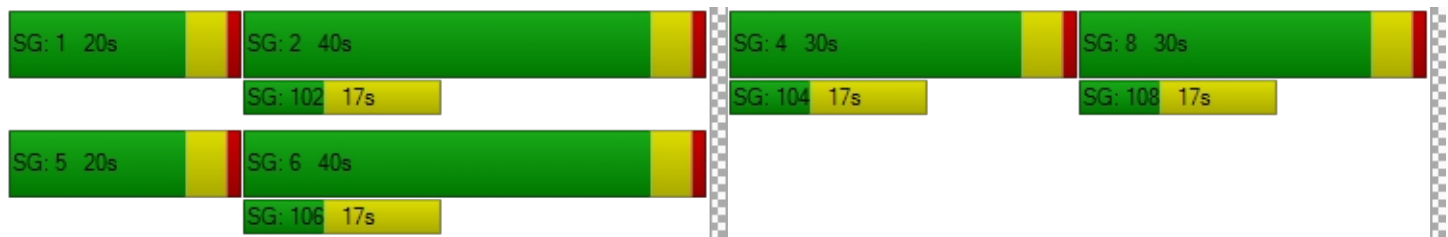
X, volume / capacity	0.22	0.59	0.15	0.84	0.92	0.47	0.50	0.76	0.83	0.99	0.82	0.60
d, Delay for Lane Group [s/veh]	35.32	28.19	21.79	56.98	45.21	37.86	51.03	54.13	56.57	81.23	51.39	43.46
Lane Group LOS	D	C	C	E	D	D	D	D	E	F	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.49	10.01	1.81	4.96	13.42	4.94	2.82	4.77	4.05	14.80	9.92	5.30
50th-Percentile Queue Length [ft]	62.28	250.15	45.19	123.92	335.54	123.52	70.58	119.28	101.20	370.02	248.05	132.39
95th-Percentile Queue Length [veh]	4.48	15.19	3.25	8.61	19.43	8.59	5.08	8.35	7.29	21.11	15.09	9.07
95th-Percentile Queue Length [ft]	112.11	379.85	81.34	215.20	485.75	214.66	127.04	208.84	182.16	527.75	377.19	226.73

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.32	28.19	21.79	56.98	45.21	37.86	51.03	54.13	56.57	81.23	51.39	43.46
Movement LOS	D	C	C	E	D	D	D	D	E	F	D	D
d_A, Approach Delay [s/veh]	28.28			45.57			54.17			62.20		
Approach LOS	C			D			D			E		
d_I, Intersection Delay [s/veh]	45.38											
Intersection LOS	D											
Intersection V/C	0.636											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌			⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	60	450	97	50	340	50	74	407	40	100	464	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	450	97	50	340	50	74	407	40	100	464	70
Peak Hour Factor	0.9550	0.9550	0.9550	0.9099	0.9099	0.9099	0.8532	0.8532	0.8532	0.9177	0.9177	0.9177
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	118	25	14	93	14	22	119	12	27	126	19
Total Analysis Volume [veh/h]	63	471	102	55	374	55	87	477	47	109	506	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	8			9			51			12		
Bicycle Volume [bicycles/h]	1			0			3			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	23	23	23	23	23	23
g / C, Green / Cycle	0.46	0.46	0.46	0.46	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.06	0.32	0.06	0.23	0.10	0.25	0.03	0.12	0.27	0.05
s, saturation flow rate [veh/h]	972	1812	853	1856	907	1900	1560	931	1900	1563
c, Capacity [veh/h]	376	828	270	848	240	740	608	259	740	609
d1, Uniform Delay [s]	17.42	12.94	21.80	11.51	24.98	14.93	11.53	24.58	15.24	11.76
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.96	4.71	1.70	2.15	0.34	0.35	0.02	0.40	0.42	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.17	0.69	0.20	0.51	0.36	0.64	0.08	0.42	0.68	0.12
d, Delay for Lane Group [s/veh]	18.39	17.65	23.50	13.66	25.32	15.29	11.55	24.99	15.66	11.79
Lane Group LOS	B	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.75	6.45	0.77	3.96	1.11	4.56	0.35	1.39	4.95	0.57
50th-Percentile Queue Length [ft]	18.75	161.36	19.17	98.90	27.84	114.07	8.63	34.84	123.72	14.22
95th-Percentile Queue Length [veh]	1.35	10.62	1.38	7.12	2.00	8.07	0.62	2.51	8.60	1.02
95th-Percentile Queue Length [ft]	33.75	265.53	34.51	178.02	50.12	201.65	15.53	62.71	214.93	25.60

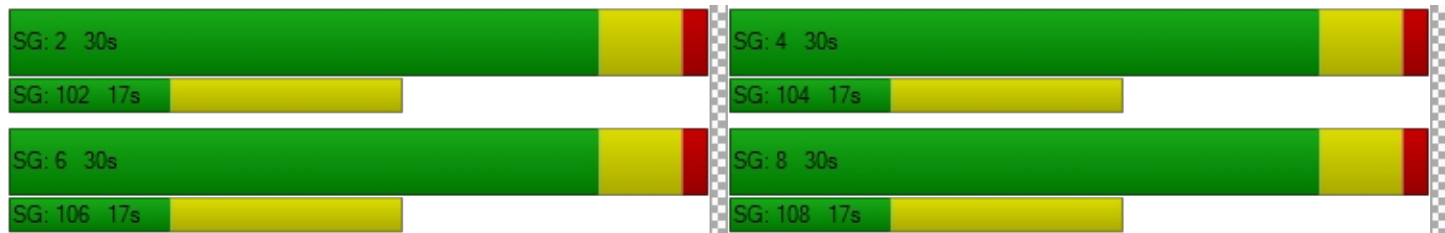


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.39	17.65	17.65	23.50	13.66	13.66	25.32	15.29	11.55	24.99	15.66	11.79
Movement LOS	B	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	17.72			14.77			16.43			16.71		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.52											
Intersection LOS	B											
Intersection V/C	0.583											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.709

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	64	980	50	134	1149	81	90	407	34	140	494	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	980	50	134	1149	81	90	407	34	140	494	87
Peak Hour Factor	0.8976	0.8976	0.8976	0.9508	0.9508	0.9508	0.8918	0.8918	0.8918	0.8666	0.8666	0.8666
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	273	14	35	302	21	25	114	10	40	143	25
Total Analysis Volume [veh/h]	71	1092	56	141	1208	85	101	456	38	162	570	100
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			32			42			46		
Bicycle Volume [bicycles/h]	8			1			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	119.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	62	50	50	62	51	51	49	36	36	49	38	38
g / C, Green / Cycle	0.51	0.42	0.42	0.51	0.42	0.42	0.41	0.30	0.30	0.41	0.31	0.31
(v / s)_j Volume / Saturation Flow Rate	0.11	0.30	0.31	0.20	0.34	0.35	0.10	0.24	0.02	0.14	0.30	0.06
s, saturation flow rate [veh/h]	635	1900	1857	702	1900	1834	1038	1900	1539	1152	1900	1563
c, Capacity [veh/h]	281	792	774	322	801	774	262	563	456	349	598	492
d1, Uniform Delay [s]	21.76	29.32	29.41	21.02	30.52	30.81	28.09	39.04	30.42	26.60	40.25	30.10
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.19	0.04	0.04	0.31	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	5.88	6.15	4.30	8.89	9.94	1.63	4.88	0.03	0.36	19.66	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

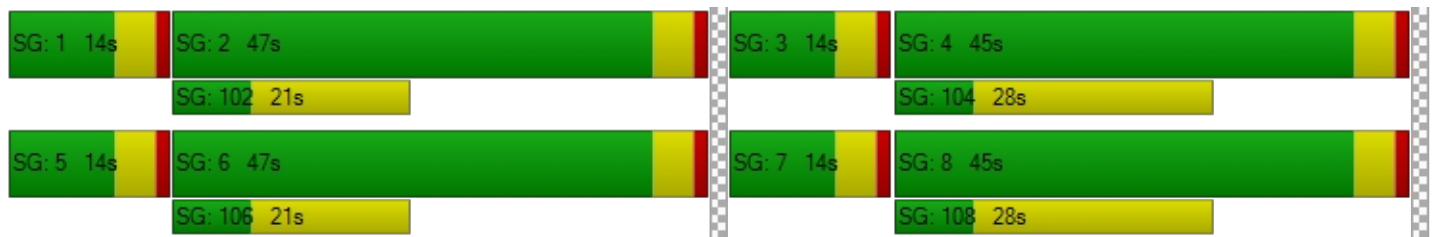
X, volume / capacity	0.25	0.73	0.74	0.44	0.81	0.83	0.39	0.81	0.08	0.46	0.95	0.20
d, Delay for Lane Group [s/veh]	23.91	35.20	35.55	25.32	39.41	40.74	29.71	43.92	30.45	26.95	59.91	30.17
Lane Group LOS	C	D	D	C	D	D	C	D	C	C	E	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.14	14.87	14.72	2.39	18.02	18.04	1.89	12.95	0.80	2.98	19.32	2.12
50th-Percentile Queue Length [ft]	28.41	371.68	367.92	59.68	450.50	450.92	47.23	323.85	19.88	74.50	482.97	52.92
95th-Percentile Queue Length [veh]	2.05	21.19	21.01	4.30	24.98	25.00	3.40	18.86	1.43	5.36	26.53	3.81
95th-Percentile Queue Length [ft]	51.13	529.77	525.21	107.42	624.54	625.05	85.01	471.42	35.79	134.11	663.17	95.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.91	35.37	35.55	25.32	40.02	40.74	29.71	43.92	30.45	26.95	59.91	30.17
Movement LOS	C	D	D	C	D	D	C	D	C	C	E	C
d_A, Approach Delay [s/veh]	34.71			38.62			40.64			49.92		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	40.05											
Intersection LOS	D											
Intersection V/C	0.709											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	21	192	100	20	170	20	60	500	60	20	595	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	192	100	20	170	20	60	500	60	20	595	22
Peak Hour Factor	0.7000	0.7000	0.7000	0.7143	0.7143	0.7143	0.9601	0.9601	0.9601	0.8847	0.8847	0.8847
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	69	36	7	60	7	16	130	16	6	168	6
Total Analysis Volume [veh/h]	30	274	143	28	238	28	62	521	62	23	673	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			27			55			20		
Bicycle Volume [bicycles/h]	0			1			6			20		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	99.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	77	77	77	77
g / C, Green / Cycle	0.28	0.28	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.27	0.21	0.08	0.31	0.03	0.37
s, saturation flow rate [veh/h]	1685	1430	759	1855	845	1885
c, Capacity [veh/h]	503	433	381	1193	455	1213
d1, Uniform Delay [s]	42.15	37.14	21.77	11.11	17.46	12.10
k, delay calibration	0.37	0.22	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	16.02	3.84	0.92	1.43	0.21	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.89	0.68	0.16	0.49	0.05	0.58
d, Delay for Lane Group [s/veh]	58.16	40.98	22.69	12.55	17.67	14.09
Lane Group LOS	E	D	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	14.96	7.85	1.19	7.92	0.37	10.38
50th-Percentile Queue Length [ft]	373.88	196.19	29.63	198.03	9.30	259.47
95th-Percentile Queue Length [veh]	21.30	12.44	2.13	12.54	0.67	15.66
95th-Percentile Queue Length [ft]	532.43	311.05	53.33	313.42	16.74	391.56

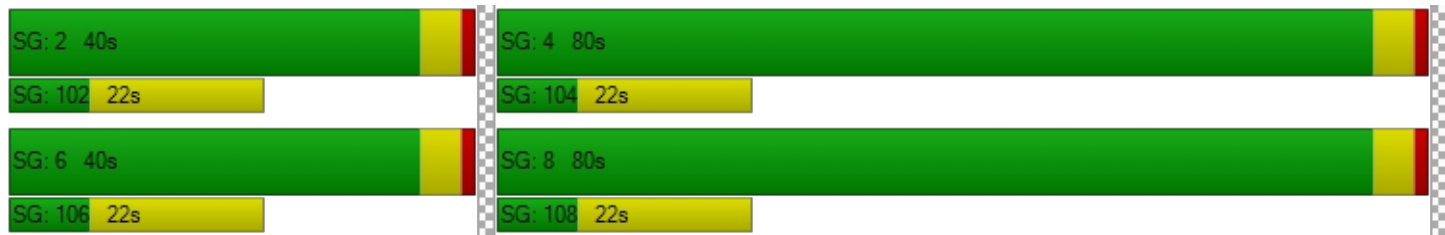


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.16	58.16	58.16	40.98	40.98	40.98	22.69	12.55	12.55	17.67	14.09	14.09
Movement LOS	E	E	E	D	D	D	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	58.16			40.98			13.52			14.21		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	27.06											
Intersection LOS	C											
Intersection V/C	0.636											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	34.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.680

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	57	728	40	170	1124	110	60	443	60	120	471	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	728	40	170	1124	110	60	443	60	120	471	154
Peak Hour Factor	0.9023	0.9023	0.9023	0.9650	0.9650	0.9650	0.8795	0.8795	0.8795	0.9821	0.9821	0.9821
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	202	11	44	291	28	17	126	17	31	120	39
Total Analysis Volume [veh/h]	63	807	44	176	1165	114	68	504	68	122	480	157
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			43			45			117		
Bicycle Volume [bicycles/h]	5			4			1			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	12	48	0	12	48	0	14	40	0	20	46	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	65	53	53	65	56	56	46	34	34	46	36	36
g / C, Green / Cycle	0.54	0.44	0.44	0.54	0.47	0.47	0.38	0.28	0.28	0.38	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.11	0.23	0.23	0.21	0.34	0.35	0.06	0.27	0.04	0.11	0.25	0.11
s, saturation flow rate [veh/h]	588	1900	1855	836	1900	1806	1068	1900	1522	1105	1900	1454
c, Capacity [veh/h]	281	841	822	434	889	845	275	533	427	273	577	441
d1, Uniform Delay [s]	18.94	24.05	24.09	16.16	25.75	26.12	27.59	42.26	32.50	29.42	38.91	32.60
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.22	0.04	0.04	0.15	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.84	2.21	2.29	2.80	5.20	6.01	0.17	15.59	0.06	0.43	4.44	0.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

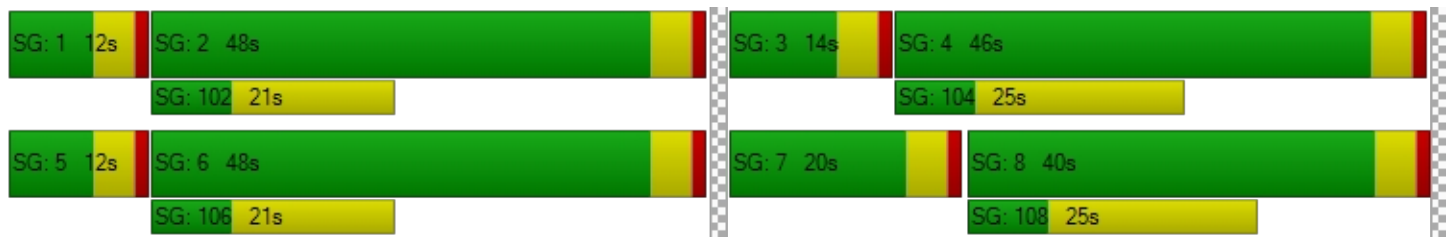
X, volume / capacity	0.22	0.51	0.51	0.41	0.73	0.75	0.25	0.95	0.16	0.45	0.83	0.36
d, Delay for Lane Group [s/veh]	20.78	26.26	26.37	18.96	30.96	32.13	27.76	57.85	32.57	29.84	43.35	32.78
Lane Group LOS	C	C	C	B	C	C	C	E	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.95	9.21	9.07	2.74	15.85	15.84	1.25	16.62	1.49	2.33	13.61	3.56
50th-Percentile Queue Length [ft]	23.72	230.28	226.86	68.55	396.17	395.88	31.33	415.40	37.31	58.20	340.20	88.91
95th-Percentile Queue Length [veh]	1.71	14.19	14.01	4.94	22.38	22.36	2.26	23.30	2.69	4.19	19.66	6.40
95th-Percentile Queue Length [ft]	42.69	354.72	350.37	123.40	559.39	559.04	56.39	582.53	67.16	104.76	491.45	160.05

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.78	26.31	26.37	18.96	31.48	32.13	27.76	57.85	32.57	29.84	43.35	32.78
Movement LOS	C	C	C	B	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	25.93			30.02			51.97			38.99		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.56											
Intersection LOS	C											
Intersection V/C	0.680											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	33	299	100	80	344	40	40	510	0	30	586	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	299	100	80	344	40	40	510	0	30	586	75
Peak Hour Factor	0.8922	0.8922	0.8922	0.8140	0.8140	0.8140	0.8760	0.8760	0.8760	0.8503	0.8503	0.8503
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	84	28	25	106	12	11	146	0	9	172	22
Total Analysis Volume [veh/h]	37	335	112	98	423	49	46	582	0	35	689	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	70			33			56			7		
Bicycle Volume [bicycles/h]	1			3			12			60		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	34	34	34	34	34	34
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.38	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.04	0.20	0.08	0.10	0.25	0.03	0.07	0.34	0.00	0.05	0.40	0.07
s, saturation flow rate [veh/h]	880	1710	1372	941	1710	1426	689	1710	1454	761	1710	1261
c, Capacity [veh/h]	246	647	520	304	647	540	168	838	712	238	838	618
d1, Uniform Delay [s]	25.64	16.80	14.71	24.17	17.95	13.99	30.79	13.80	0.00	24.79	15.25	9.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.16	0.04	0.04	0.26	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.29	2.94	0.95	2.80	5.07	0.33	0.33	1.52	0.00	0.10	4.93	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.52	0.22	0.32	0.65	0.09	0.27	0.69	0.00	0.15	0.82	0.14
d, Delay for Lane Group [s/veh]	26.93	19.74	15.66	26.97	23.03	14.32	31.11	15.32	0.00	24.89	20.18	9.83
Lane Group LOS	C	B	B	C	C	B	C	B	A	C	C	A
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.60	4.27	1.23	1.57	5.96	0.51	0.73	6.34	0.00	0.48	8.98	0.65
50th-Percentile Queue Length [ft]	14.95	106.82	30.82	39.27	149.08	12.65	18.24	158.60	0.00	11.96	224.56	16.23
95th-Percentile Queue Length [veh]	1.08	7.66	2.22	2.83	9.97	0.91	1.31	10.47	0.00	0.86	13.90	1.17
95th-Percentile Queue Length [ft]	26.91	191.57	55.48	70.69	249.20	22.76	32.82	261.87	0.00	21.53	347.44	29.21

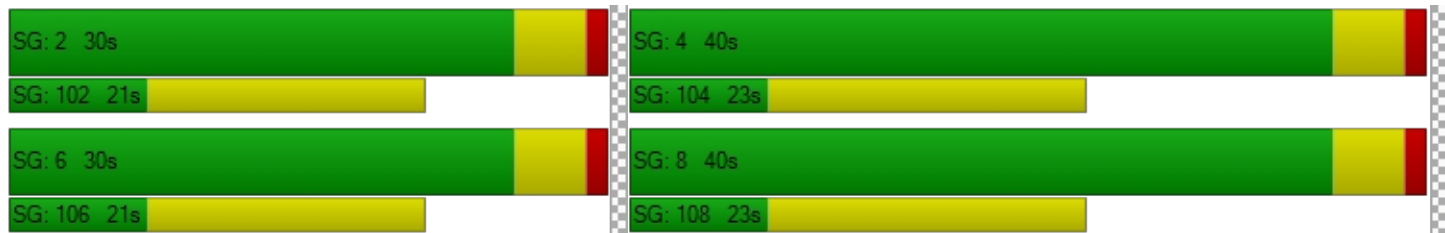


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.93	19.74	15.66	26.97	23.03	14.32	31.11	15.32	0.00	24.89	20.18	9.83
Movement LOS	C	B	B	C	C	B	C	B	A	C	C	A
d_A, Approach Delay [s/veh]	19.35			22.96			16.48			19.26		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.42											
Intersection LOS	B											
Intersection V/C	0.650											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	30	287	150	110	601	130	180	360	120	120	530	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	287	150	110	601	130	180	360	120	120	530	90
Peak Hour Factor	0.9212	0.9212	0.9212	0.9064	0.9064	0.9064	0.9184	0.9184	0.9184	0.8955	0.8955	0.8955
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	78	41	30	166	36	49	98	33	34	148	25
Total Analysis Volume [veh/h]	33	312	163	121	663	143	196	392	131	134	592	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	43			39			53			47		
Bicycle Volume [bicycles/h]	7			7			11			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	46	46	37	37	37	35	24	24	35	22	22
g / C, Green / Cycle	0.51	0.51	0.51	0.42	0.42	0.42	0.39	0.26	0.26	0.39	0.24	0.24
(v / s)_j Volume / Saturation Flow Rate	0.04	0.16	0.11	0.11	0.22	0.22	0.18	0.21	0.09	0.11	0.19	0.19
s, saturation flow rate [veh/h]	849	1900	1542	1068	1900	1748	1102	1900	1511	1224	1900	1761
c, Capacity [veh/h]	432	969	786	390	787	724	412	496	395	403	456	423
d1, Uniform Delay [s]	12.50	12.95	12.11	25.60	19.81	19.93	20.84	30.99	26.93	20.12	32.00	32.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.05	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.88	0.60	2.06	2.53	2.87	3.27	1.31	0.18	0.18	1.10	1.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

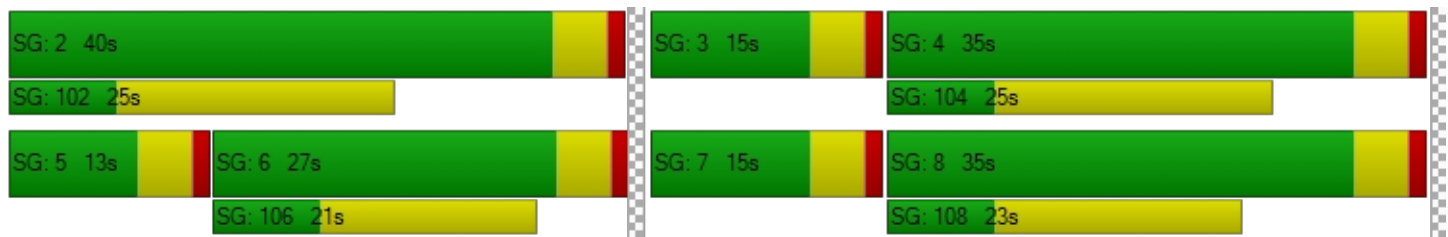
X, volume / capacity	0.08	0.32	0.21	0.31	0.53	0.54	0.48	0.79	0.33	0.33	0.78	0.80
d, Delay for Lane Group [s/veh]	12.84	13.83	12.71	27.66	22.34	22.80	24.12	32.30	27.11	20.30	33.10	33.53
Lane Group LOS	B	B	B	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.36	3.73	1.84	2.25	6.80	6.48	3.11	7.89	2.26	1.79	7.09	6.81
50th-Percentile Queue Length [ft]	8.90	93.33	45.94	56.24	170.12	162.12	77.73	197.20	56.46	44.69	177.24	170.16
95th-Percentile Queue Length [veh]	0.64	6.72	3.31	4.05	11.08	10.66	5.60	12.49	4.06	3.22	11.46	11.08
95th-Percentile Queue Length [ft]	16.03	167.99	82.70	101.23	277.07	266.53	139.91	312.36	101.62	80.44	286.41	277.12

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.84	13.83	12.71	27.66	22.51	22.80	24.12	32.30	27.11	20.30	33.27	33.53
Movement LOS	B	B	B	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.41			23.23			29.12			31.20		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	25.19											
Intersection LOS	C											
Intersection V/C	0.505											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	35.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	10	390	70	50	0	50	0	825	430	130	929	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	390	70	50	0	50	0	825	430	130	929	0
Peak Hour Factor	0.8935	0.8935	0.8935	0.8363	1.0000	0.8363	1.0000	0.9111	0.9111	0.9726	0.9726	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	109	20	15	0	15	0	226	118	33	239	0
Total Analysis Volume [veh/h]	11	436	78	60	0	60	0	906	472	134	955	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			35			151			0		
Bicycle Volume [bicycles/h]	26			4			26			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	40	0	40	0	65	0	23	0	17	40	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	7	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	11	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	2	31	31	6	50	54	54	11	69
g / C, Green / Cycle	0.02	0.26	0.26	0.05	0.42	0.45	0.45	0.09	0.58
(v / s)_j Volume / Saturation Flow Rate	0.01	0.14	0.15	0.02	0.02	0.36	0.42	0.07	0.26
s, saturation flow rate [veh/h]	1810	1900	1658	3514	2818	1900	1637	1810	3618
c, Capacity [veh/h]	33	490	428	180	1180	851	733	162	2083
d1, Uniform Delay [s]	58.18	38.34	38.95	54.95	20.73	28.67	31.57	53.74	14.67
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.16	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.14	0.34	0.48	0.40	0.01	8.19	21.35	14.29	0.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.33	0.54	0.59	0.33	0.05	0.81	0.94	0.83	0.46
d, Delay for Lane Group [s/veh]	60.32	38.67	39.43	55.36	20.73	36.86	52.92	68.03	15.40
Lane Group LOS	E	D	D	E	C	D	D	E	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.35	6.70	6.54	0.89	0.51	17.95	21.98	4.81	8.38
50th-Percentile Queue Length [ft]	8.75	167.48	163.44	22.19	12.68	448.85	549.57	120.30	209.41
95th-Percentile Queue Length [veh]	0.63	10.94	10.73	1.60	0.91	24.90	29.67	8.41	13.12
95th-Percentile Queue Length [ft]	15.75	273.60	268.27	39.95	22.82	622.58	741.80	210.24	328.08

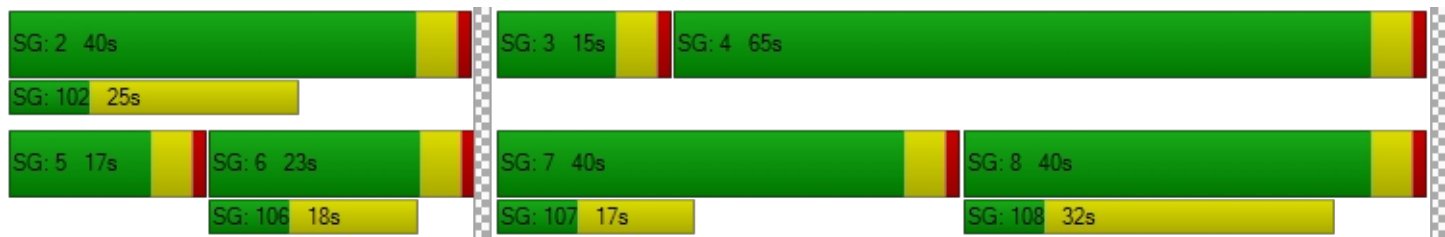


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	60.32	38.98	39.43	55.36	0.00	20.73	0.00	40.71	52.92	68.03	15.40	0.00
Movement LOS	E	D	D	E		C		D	D	E	B	
d_A, Approach Delay [s/veh]	39.49			38.04			44.89			21.87		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	35.66											
Intersection LOS	D											
Intersection V/C	0.664											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	10.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↱			↵↱			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1154	20	40	1294	30	60	70	30	30	100	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1154	20	40	1294	30	60	70	30	30	100	10
Peak Hour Factor	0.9038	0.9038	0.9038	0.9405	0.9405	0.9405	0.7443	0.7443	0.7443	0.8512	0.8512	0.8512
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	319	6	11	344	8	20	24	10	9	29	3
Total Analysis Volume [veh/h]	33	1277	22	43	1376	32	81	94	40	35	117	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			27			23			34		
Bicycle Volume [bicycles/h]	4			0			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	17	17
g / C, Green / Cycle	0.68	0.68	0.68	0.68	0.68	0.68	0.21	0.21
(v / s)_j Volume / Saturation Flow Rate	0.09	0.34	0.34	0.10	0.37	0.37	0.14	0.10
s, saturation flow rate [veh/h]	388	1900	1886	431	1900	1882	1507	1694
c, Capacity [veh/h]	269	1287	1277	298	1287	1275	375	406
d1, Uniform Delay [s]	12.72	6.33	6.34	11.86	6.62	6.63	29.17	27.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.94	1.42	1.44	1.01	1.69	1.71	0.52	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

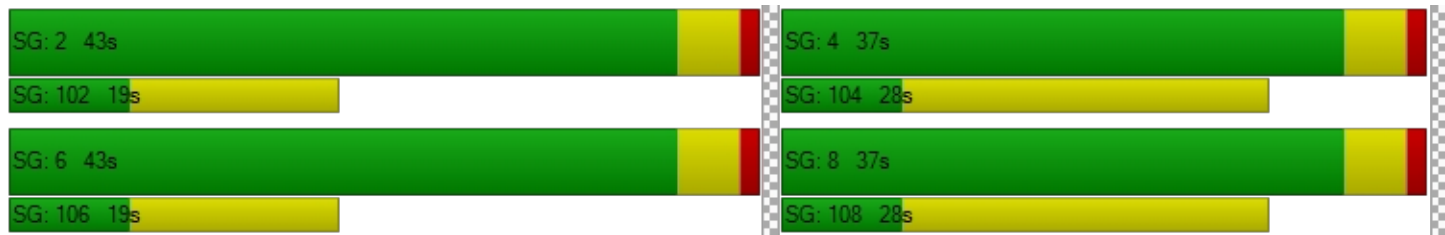
X, volume / capacity	0.12	0.51	0.51	0.14	0.55	0.55	0.57	0.40
d, Delay for Lane Group [s/veh]	13.66	7.75	7.78	12.87	8.31	8.35	29.68	27.76
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.39	4.55	4.54	0.48	5.19	5.17	3.70	2.63
50th-Percentile Queue Length [ft]	9.77	113.80	113.46	12.12	129.72	129.36	92.38	65.70
95th-Percentile Queue Length [veh]	0.70	8.05	8.03	0.87	8.92	8.90	6.65	4.73
95th-Percentile Queue Length [ft]	17.59	201.27	200.81	21.82	223.12	222.62	166.29	118.27

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	13.66	7.76	7.78	12.87	8.33	8.35	29.68	29.68	29.68	27.76	27.76	27.76
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.91			8.46			29.68			27.76		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	10.67											
Intersection LOS	B											
Intersection V/C	0.516											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.606

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	758	30	50	1314	30	40	120	20	70	160	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	758	30	50	1314	30	40	120	20	70	160	40
Peak Hour Factor	0.8756	0.8756	0.8756	0.9292	0.9292	0.9292	0.6907	0.6907	0.6907	0.8229	0.8229	0.8229
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	216	9	13	354	8	14	43	7	21	49	12
Total Analysis Volume [veh/h]	34	866	34	54	1414	32	58	174	29	85	194	49
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			27			35			50		
Bicycle Volume [bicycles/h]	11			0			4			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.28	0.28
(v / s)_j Volume / Saturation Flow Rate	0.09	0.24	0.24	0.09	0.38	0.38	0.18	0.22
s, saturation flow rate [veh/h]	374	1900	1865	627	1900	1881	1465	1471
c, Capacity [veh/h]	218	1153	1132	379	1153	1142	462	465
d1, Uniform Delay [s]	19.02	8.10	8.12	12.72	9.98	10.01	24.53	26.71
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.52	1.01	1.03	0.79	2.60	2.66	0.40	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.16	0.39	0.39	0.14	0.63	0.63	0.56	0.70
d, Delay for Lane Group [s/veh]	20.54	9.11	9.15	13.51	12.58	12.66	24.93	27.45
Lane Group LOS	C	A	A	B	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.53	3.81	3.77	0.62	7.70	7.70	4.04	5.62
50th-Percentile Queue Length [ft]	13.28	95.21	94.27	15.53	192.61	192.39	101.07	140.55
95th-Percentile Queue Length [veh]	0.96	6.86	6.79	1.12	12.26	12.25	7.28	9.51
95th-Percentile Queue Length [ft]	23.90	171.38	169.68	27.96	306.42	306.13	181.93	237.77



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.54	9.13	9.15	13.51	12.62	12.66	24.93	24.93	24.93	27.45	27.45	27.45
Movement LOS	C	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.54			12.65			24.93			27.45		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.36											
Intersection LOS	B											
Intersection V/C	0.606											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.632

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	30	1110	10	30	1384	70	20	110	10	180	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1110	10	30	1384	70	20	110	10	180	80	20
Peak Hour Factor	0.8700	0.8700	0.8700	0.9380	0.9380	0.9380	0.8673	0.8673	0.8673	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	319	3	8	369	19	6	32	3	49	22	5
Total Analysis Volume [veh/h]	34	1276	11	32	1475	75	23	127	12	195	87	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			14			32			22		
Bicycle Volume [bicycles/h]	0			2			6			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	22	22	22	22
g / C, Green / Cycle	0.61	0.61	0.61	0.61	0.61	0.61	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.10	0.34	0.34	0.07	0.41	0.41	0.14	0.01	0.22	0.01
s, saturation flow rate [veh/h]	339	1900	1893	436	1900	1859	1085	1564	1300	1558
c, Capacity [veh/h]	198	1162	1158	261	1162	1138	348	427	431	426
d1, Uniform Delay [s]	20.69	9.12	9.13	15.95	10.22	10.30	23.51	21.29	26.98	21.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	1.91	1.92	0.96	3.08	3.25	0.31	0.01	0.63	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

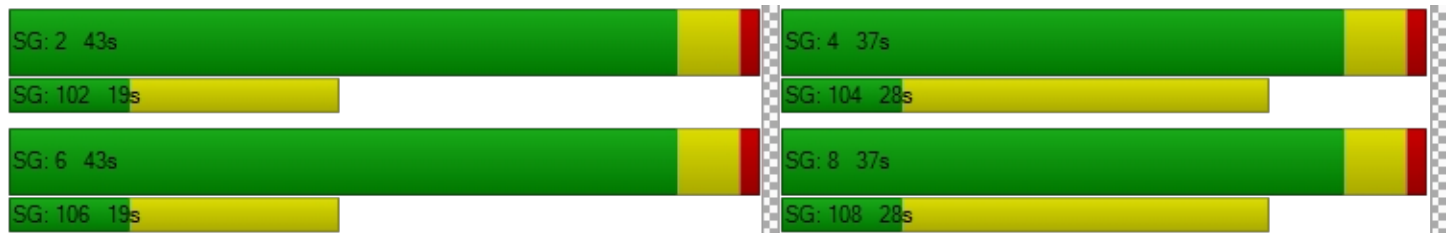
X, volume / capacity	0.17	0.55	0.55	0.12	0.67	0.68	0.43	0.03	0.65	0.05
d, Delay for Lane Group [s/veh]	22.57	11.03	11.04	16.91	13.30	13.55	23.82	21.30	27.61	21.45
Lane Group LOS	C	B	B	B	B	B	C	C	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.56	5.99	5.98	0.43	8.28	8.29	2.15	0.16	4.77	0.29
50th-Percentile Queue Length [ft]	13.97	149.79	149.53	10.72	206.89	207.25	53.85	3.97	119.30	7.33
95th-Percentile Queue Length [veh]	1.01	10.01	9.99	0.77	12.99	13.01	3.88	0.29	8.35	0.53
95th-Percentile Queue Length [ft]	25.14	250.15	249.81	19.29	324.83	325.29	96.94	7.15	208.86	13.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.57	11.04	11.04	16.91	13.42	13.55	23.82	23.82	21.30	27.61	27.61	21.45
Movement LOS	C	B	B	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	11.33			13.50			23.64			27.16		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.37											
Intersection LOS	B											
Intersection V/C	0.632											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1180	120	70	1394	160	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1180	120	70	1394	160	120
Peak Hour Factor	0.9432	0.9432	0.9448	0.9448	0.9478	0.9478
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	313	32	19	369	42	32
Total Analysis Volume [veh/h]	1251	127	74	1475	169	127
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	9		0		45	
Bicycle Volume [bicycles/h]	0		0		3	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.4	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	69	69	69	69	11	11
g / C, Green / Cycle	0.77	0.77	0.77	0.77	0.13	0.13
(v / s)_j Volume / Saturation Flow Rate	0.37	0.38	0.19	0.42	0.10	0.08
s, saturation flow rate [veh/h]	1863	1793	392	3547	1771	1556
c, Capacity [veh/h]	1439	1385	313	2739	222	195
d1, Uniform Delay [s]	3.69	3.78	9.08	3.99	38.00	37.43
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.14	1.28	1.77	0.76	5.35	3.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.48	0.50	0.24	0.54	0.76	0.65
d, Delay for Lane Group [s/veh]	4.84	5.06	10.84	4.75	43.35	41.07
Lane Group LOS	A	A	B	A	D	D
Critical Lane Group	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	3.27	3.37	0.81	3.82	3.83	2.79
50th-Percentile Queue Length [ft]	81.70	84.22	20.31	95.55	95.78	69.73
95th-Percentile Queue Length [veh]	5.88	6.06	1.46	6.88	6.90	5.02
95th-Percentile Queue Length [ft]	147.06	151.60	36.56	171.99	172.40	125.51

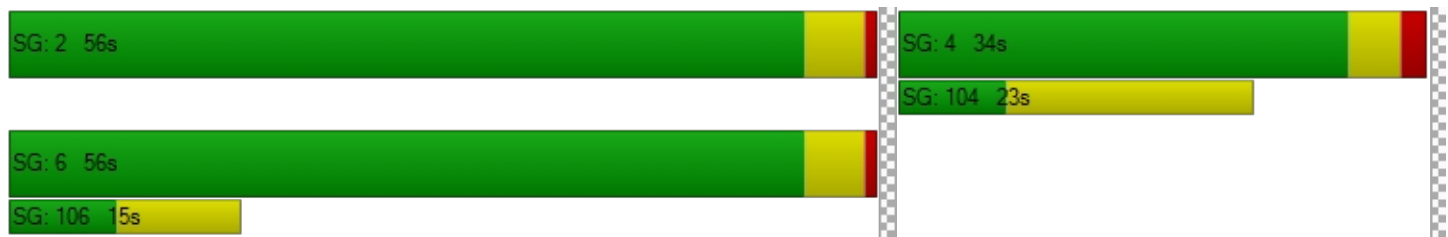


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	4.94	5.06	10.84	4.75	43.35	41.07
Movement LOS	A	A	B	A	D	D
d_A, Approach Delay [s/veh]	4.95		5.04		42.37	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	8.43					
Intersection LOS	A					
Intersection V/C	0.511					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	764	97	80	1366	50	129	290	50	30	210	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	764	97	80	1366	50	129	290	50	30	210	50
Peak Hour Factor	0.9202	0.9202	0.9202	0.8995	0.8995	0.8995	0.8833	0.8833	0.8833	0.8881	0.8881	0.8881
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	208	26	22	380	14	37	82	14	8	59	14
Total Analysis Volume [veh/h]	22	830	105	89	1519	56	146	328	57	34	236	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	58			20			16			40		
Bicycle Volume [bicycles/h]	3			2			2			14		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	39.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	27	23	23
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.07	0.25	0.25	0.15	0.42	0.42	0.36	0.19
s, saturation flow rate [veh/h]	331	1900	1807	608	1900	1866	1479	1682
c, Capacity [veh/h]	132	864	821	267	864	848	656	725
d1, Uniform Delay [s]	29.33	11.88	11.92	20.18	15.23	15.36	17.34	13.49
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.33	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.70	2.53	2.73	3.34	15.80	17.37	7.03	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

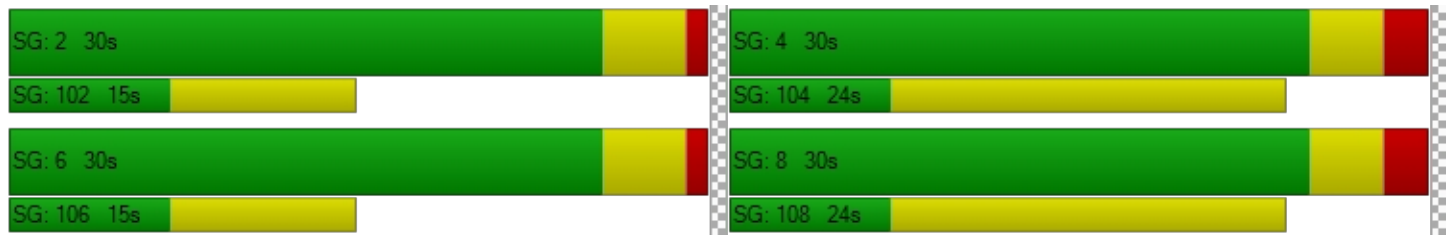
X, volume / capacity	0.17	0.55	0.56	0.33	0.91	0.93	0.81	0.45
d, Delay for Lane Group [s/veh]	32.03	14.41	14.65	23.52	31.03	32.73	24.37	13.65
Lane Group LOS	C	B	B	C	C	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.40	4.55	4.43	1.26	12.17	12.49	7.17	2.82
50th-Percentile Queue Length [ft]	10.04	113.79	110.65	31.58	304.21	312.26	179.37	70.40
95th-Percentile Queue Length [veh]	0.72	8.05	7.88	2.27	17.89	18.29	11.57	5.07
95th-Percentile Queue Length [ft]	18.08	201.26	196.91	56.85	447.23	457.16	289.19	126.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	32.03	14.51	14.65	23.52	31.85	32.73	24.37	24.37	24.37	13.65	13.65	13.65
Movement LOS	C	B	B	C	C	C	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	14.93			31.43			24.37			13.65		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	24.15											
Intersection LOS	C											
Intersection V/C	0.780											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	189	120	40	214	20	70	419	50	10	377	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	189	120	40	214	20	70	419	50	10	377	20
Peak Hour Factor	0.8592	0.8592	0.8592	0.8355	0.8355	0.8355	0.8405	0.8405	0.8405	0.9306	0.9306	0.9306
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	55	35	12	64	6	21	125	15	3	101	5
Total Analysis Volume [veh/h]	23	220	140	48	256	24	83	499	59	11	405	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			9			12			6		
Bicycle Volume [bicycles/h]	2			3			11			23		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	19	19	19	32	32
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.02	0.21	0.05	0.14	0.02	0.37	0.23
s, saturation flow rate [veh/h]	1137	1712	1016	1863	1531	1725	1862
c, Capacity [veh/h]	296	529	200	576	474	995	1062
d1, Uniform Delay [s]	21.87	18.13	26.71	16.60	14.55	9.86	8.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	1.54	0.61	0.54	0.04	3.21	1.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.08	0.68	0.24	0.44	0.05	0.64	0.41
d, Delay for Lane Group [s/veh]	21.98	19.68	27.32	17.14	14.59	13.07	9.55
Lane Group LOS	C	B	C	B	B	B	A
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.27	4.05	0.66	2.64	0.22	5.40	2.98
50th-Percentile Queue Length [ft]	6.66	101.28	16.53	66.07	5.40	134.94	74.43
95th-Percentile Queue Length [veh]	0.48	7.29	1.19	4.76	0.39	9.21	5.36
95th-Percentile Queue Length [ft]	11.98	182.31	29.76	118.93	9.71	230.20	133.97

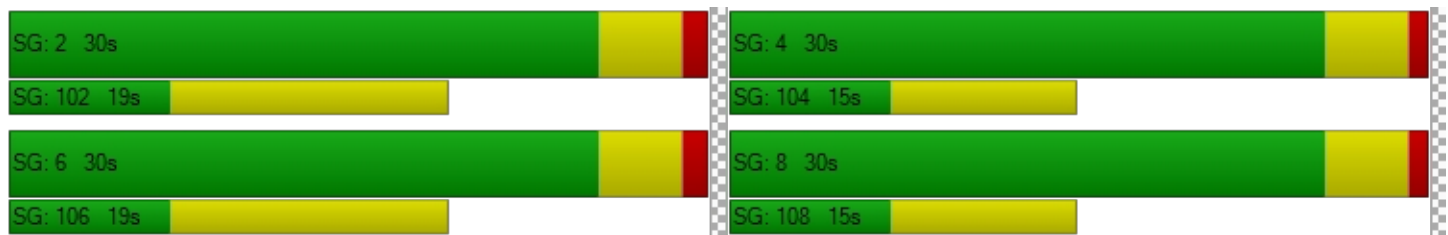


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.98	19.68	19.68	27.32	17.14	14.59	13.07	13.07	13.07	9.55	9.55	9.55
Movement LOS	C	B	B	C	B	B	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	19.82			18.44			13.07			9.55		
Approach LOS	B			B			B			A		
d_I, Intersection Delay [s/veh]	14.64											
Intersection LOS	B											
Intersection V/C	0.582											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	25.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	771	0	200	0	0	0	0	1269	317	150	1483	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	771	0	200	0	0	0	0	1269	317	150	1483	0
Peak Hour Factor	0.9561	0.9561	0.9561	0.7500	0.7500	0.7500	0.9134	0.9134	0.9134	0.8730	0.8730	0.8730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	0	52	0	0	0	0	347	87	43	425	0
Total Analysis Volume [veh/h]	806	0	209	0	0	0	0	1389	347	172	1699	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			6			0			23		
Bicycle Volume [bicycles/h]	2			2			0			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	112.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	46	0	0	19	0	0	55	46	0	55	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	40	40	0	66	66	110	66	66	66
g / C, Green / Cycle	0.33	0.33	0.00	0.55	0.55	0.92	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.28	0.30	0.00	0.00	0.27	0.22	0.43	0.31	0.31
s, saturation flow rate [veh/h]	1810	1689	1863	288	5176	1595	395	3618	1900
c, Capacity [veh/h]	603	563	7	154	2834	1461	203	1981	1040
d1, Uniform Delay [s]	37.15	37.90	0.00	0.00	16.76	0.54	41.88	17.72	17.72
k, delay calibration	0.18	0.20	0.11	0.50	0.50	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.59	9.04	0.00	0.00	0.61	0.08	33.08	1.16	2.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

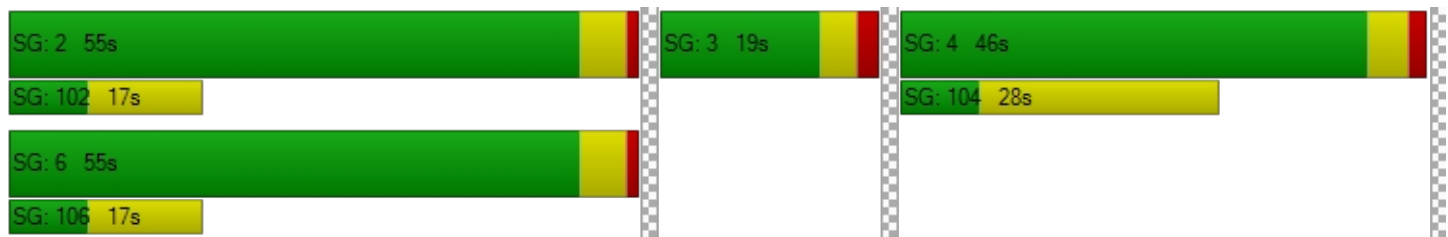
X, volume / capacity	0.85	0.89	0.00	0.00	0.49	0.24	0.85	0.56	0.56
d, Delay for Lane Group [s/veh]	42.74	46.94	0.00	0.00	17.37	0.62	74.96	18.88	19.92
Lane Group LOS	D	D	A	A	B	A	E	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	14.74	15.22	0.00	0.00	7.73	0.03	7.06	9.95	10.75
50th-Percentile Queue Length [ft]	368.49	380.50	0.00	0.00	193.26	0.84	176.50	248.68	268.72
95th-Percentile Queue Length [veh]	21.04	21.62	0.00	0.00	12.29	0.06	11.42	15.12	16.13
95th-Percentile Queue Length [ft]	525.89	540.45	0.00	0.00	307.26	1.51	285.44	377.99	403.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.28	46.94	46.94	0.00	0.00	0.00	0.00	17.37	0.62	74.96	19.24	19.92
Movement LOS	D	D	D	A	A	A	A	B	A	E	B	B
d_A, Approach Delay [s/veh]	44.82			0.00			14.02			24.36		
Approach LOS	D			A			B			C		
d_I, Intersection Delay [s/veh]	24.97											
Intersection LOS	C											
Intersection V/C	0.732											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 168: Arizona Ave / 23rd St.**

Control Type:	All-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.682

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	10	167	93	30	245	33	42	131	90	21	225	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	167	93	30	245	33	42	131	90	21	225	30
Peak Hour Factor	0.8086	0.8086	0.8086	0.8750	0.8750	0.8750	0.8821	0.8821	0.8821	0.9141	0.9141	0.9141
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	52	29	9	70	9	12	37	26	6	62	8
Total Analysis Volume [veh/h]	12	207	115	34	280	38	48	149	102	23	246	33
Pedestrian Volume [ped/h]	17			9			15			28		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	523	516	510	502
Degree of Utilization, x	0.64	0.68	0.59	0.60

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	4.47	5.14	3.73	3.91
95th-Percentile Queue Length [ft]	111.65	128.58	93.27	97.73
Approach Delay [s/veh]	21.28	23.63	19.60	20.38
Approach LOS	C	C	C	C
Intersection Delay [s/veh]	21.32			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST\)/MONTANA AVENUE \ (102\)**

Control Type:	Signalized	Delay (sec / veh):	5.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.383

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	674	527	49	93	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	674	527	49	93	20
Peak Hour Factor	0.8301	0.8301	0.9056	0.9056	0.8300	0.8300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	203	145	14	28	6
Total Analysis Volume [veh/h]	12	812	582	54	112	24
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15		0		21	
Bicycle Volume [bicycles/h]	1		0		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	24	24	24	24	24
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	11	11	11	11	4
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.18
(v / s)_j Volume / Saturation Flow Rate	0.01	0.22	0.31	0.03	0.08
s, saturation flow rate [veh/h]	840	3618	1900	1577	1772
c, Capacity [veh/h]	397	1597	839	696	318
d1, Uniform Delay [s]	9.53	4.88	5.45	3.92	8.85
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.09	0.39	0.02	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

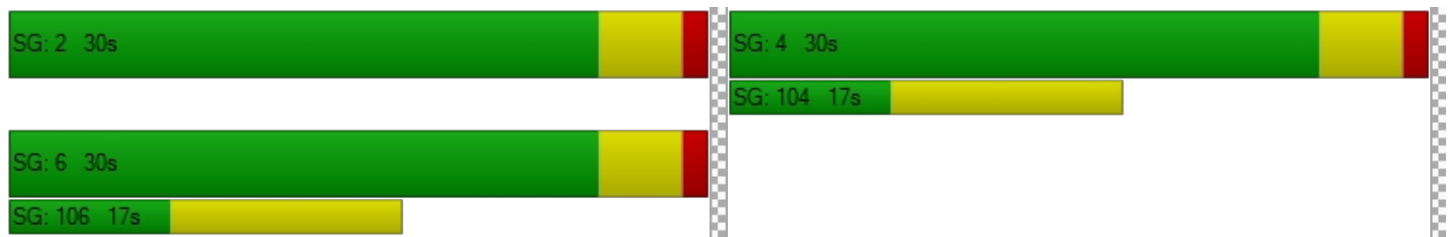
X, volume / capacity	0.03	0.51	0.69	0.08	0.43
d, Delay for Lane Group [s/veh]	9.54	4.97	5.84	3.94	9.19
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.47	0.81	0.05	0.46
50th-Percentile Queue Length [ft]	0.95	11.76	20.28	1.28	11.39
95th-Percentile Queue Length [veh]	0.07	0.85	1.46	0.09	0.82
95th-Percentile Queue Length [ft]	1.71	21.16	36.50	2.31	20.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	9.54	4.97	5.84	3.94	9.19	9.19
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.04		5.68		9.19	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.65					
Intersection LOS	A					
Intersection V/C	0.383					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \(\WEST\)OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	40	1020	10	10	1510	700	550	10	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	40	1020	10	10	1510	700	550	10	50
Peak Hour Factor	1.0000	1.0000	1.0000	0.8327	0.8327	1.0000	1.0000	0.9535	0.9535	0.8083	1.0000	0.8083
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	12	306	3	3	396	184	170	3	15
Total Analysis Volume [veh/h]	0	0	0	48	1225	10	10	1584	734	680	10	62
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0	
Auxiliary Signal Groups									2,4				
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-	
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0	
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0	
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0	
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0	
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0	
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0	
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0	
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0	
Rest In Walk					No			No			No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0	
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0	
Minimum Recall					Yes			Yes			No		
Maximum Recall					No			No			No		
Pedestrian Recall					No			No			No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		60	60	60	60	60	60	21	21
g / C, Green / Cycle		0.66	0.66	0.66	0.66	0.66	0.66	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate		0.15	0.33	0.33	0.02	0.44	0.45	0.19	0.04
s, saturation flow rate [veh/h]		328	1900	1895	449	3618	1615	3514	1617
c, Capacity [veh/h]		201	1262	1258	291	2403	1073	820	378
d1, Uniform Delay [s]		20.93	7.51	7.51	12.89	9.01	9.29	32.73	27.62
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		2.78	1.36	1.37	0.22	1.44	3.55	2.23	0.24
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.24	0.49	0.49	0.03	0.66	0.68	0.83	0.19
d, Delay for Lane Group [s/veh]		23.72	8.87	8.88	13.11	10.45	12.84	34.96	27.87
Lane Group LOS		C	A	A	B	B	B	C	C
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		0.95	6.76	6.74	0.12	7.92	8.16	7.01	1.23
50th-Percentile Queue Length [ft]		23.86	168.92	168.55	3.03	198.02	204.11	175.31	30.84
95th-Percentile Queue Length [veh]		1.72	11.02	11.00	0.22	12.54	12.85	11.36	2.22
95th-Percentile Queue Length [ft]		42.95	275.50	275.01	5.46	313.41	321.26	283.88	55.50

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	23.72	8.88	8.88	13.11	10.45	12.84	34.96	27.87	27.87
Movement LOS				C	A	A	B	B	B	C	C	C
d_A, Approach Delay [s/veh]	0.00			9.43			11.22			34.28		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	14.67											
Intersection LOS	B											
Intersection V/C	0.648											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	85.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	611	340	410	0	530	347	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	611	340	410	0	530	347	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9241	0.9241	0.9276	1.0000	0.9276	0.9390	1.0000	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	165	92	110	0	143	92	0	21
Total Analysis Volume [veh/h]	0	0	0	0	661	368	442	0	571	370	0	85
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			0			0			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	31.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	1.0	0.0	0.0
Split [s]	0	0	0	0	35	19	19	0	55	36	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		30	49	14	50	31	31
g / C, Green / Cycle		0.34	0.55	0.16	0.56	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate		0.37	0.23	0.24	0.30	0.19	0.05
s, saturation flow rate [veh/h]		1810	1615	1810	1900	1900	1615
c, Capacity [veh/h]		610	897	290	1065	663	564
d1, Uniform Delay [s]		29.83	11.53	37.79	12.43	23.68	20.13
k, delay calibration		0.50	0.43	0.48	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		61.01	1.19	251.53	1.94	3.37	0.57
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

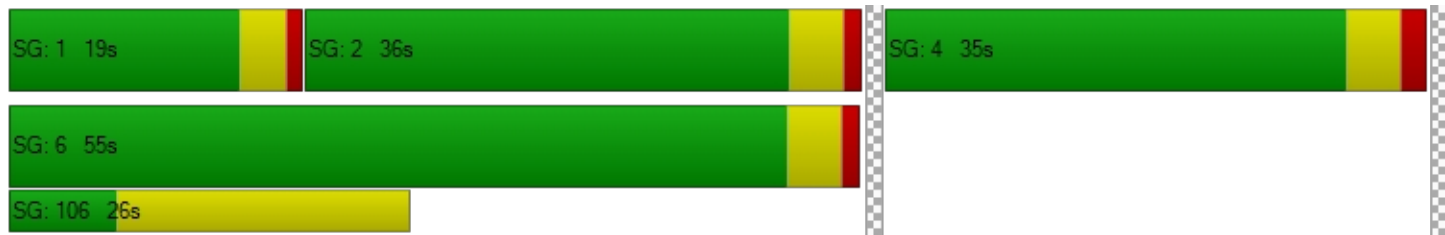
X, volume / capacity		1.08	0.41	1.52	0.54	0.56	0.15
d, Delay for Lane Group [s/veh]		90.84	12.71	289.32	14.36	27.05	20.70
Lane Group LOS		F	B	F	B	C	C
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		23.35	4.43	26.54	7.19	6.77	1.29
50th-Percentile Queue Length [ft]		583.84	110.85	663.47	179.83	169.36	32.26
95th-Percentile Queue Length [veh]		32.97	7.89	41.34	11.59	11.04	2.32
95th-Percentile Queue Length [ft]		824.23	197.19	1033.57	289.79	276.07	58.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	90.84	12.71	289.32	0.00	14.36	27.05	0.00	20.70
Movement LOS					F	B	F		B	C		C
d_A, Approach Delay [s/veh]	0.00			62.90			134.34			25.86		
Approach LOS	A			E			F			C		
d_I, Intersection Delay [s/veh]	85.13											
Intersection LOS	F											
Intersection V/C	0.804											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	59	180	100	170	220	10	70	1013	60	0	1040	94
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	180	100	170	220	10	70	1013	60	0	1040	94
Peak Hour Factor	0.8882	0.8882	0.8882	0.7940	0.7940	0.7940	0.9481	0.9481	0.9481	1.0000	0.9334	0.9334
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	51	28	54	69	3	18	267	16	0	279	25
Total Analysis Volume [veh/h]	66	203	113	214	277	13	74	1068	63	0	1114	101
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			20			51			16		
Bicycle Volume [bicycles/h]	1			1			10			6		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	32	32	49	49	49	49	49
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.54	0.54	0.54	0.54	0.54
(v / s)_j Volume / Saturation Flow Rate	0.07	0.12	0.08	0.21	0.17	0.18	0.23	0.24	0.36	0.38
s, saturation flow rate [veh/h]	971	1676	1347	1041	1661	412	3192	1615	1676	1613
c, Capacity [veh/h]	267	600	482	330	594	184	1724	872	905	871
d1, Uniform Delay [s]	31.49	21.12	20.26	32.68	22.49	30.74	12.44	12.47	14.93	15.27
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	0.33	0.25	2.14	0.62	6.47	0.80	1.60	3.95	4.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

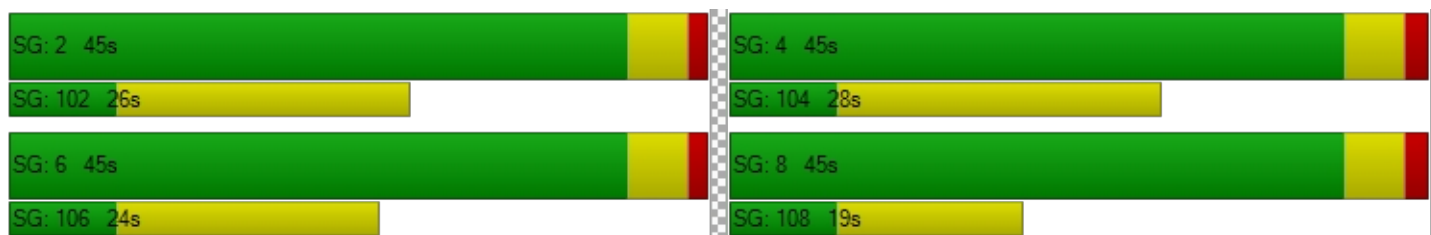
X, volume / capacity	0.25	0.34	0.23	0.65	0.49	0.40	0.43	0.44	0.67	0.70
d, Delay for Lane Group [s/veh]	31.97	21.45	20.51	34.81	23.11	37.21	13.23	14.07	18.88	19.88
Lane Group LOS	C	C	C	C	C	D	B	B	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.26	3.10	1.66	4.54	4.74	1.76	4.39	4.69	9.18	9.49
50th-Percentile Queue Length [ft]	31.56	77.56	41.51	113.49	118.45	43.90	109.85	117.36	229.54	237.28
95th-Percentile Queue Length [veh]	2.27	5.58	2.99	8.03	8.31	3.16	7.83	8.25	14.15	14.54
95th-Percentile Queue Length [ft]	56.81	139.60	74.71	200.84	207.69	79.02	195.79	206.19	353.77	363.59

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.97	21.45	20.51	34.81	23.11	23.11	37.21	13.49	14.07	0.00	19.33	19.88
Movement LOS	C	C	C	C	C	C	D	B	B		B	B
d_A, Approach Delay [s/veh]	22.99			28.08			14.97			19.38		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.52											
Intersection LOS	B											
Intersection V/C	0.582											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	46.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.753

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	70	1300	80	149	1434	80	190	640	141	110	650	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1300	80	149	1434	80	190	640	141	110	650	90
Peak Hour Factor	0.9658	0.9658	0.9658	0.9387	0.9387	0.9387	0.9526	0.9526	0.9526	0.9349	0.9349	0.9349
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	337	21	40	382	21	50	168	37	29	174	24
Total Analysis Volume [veh/h]	72	1346	83	159	1528	85	199	672	148	118	695	96
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	44			52			47			98		
Bicycle Volume [bicycles/h]	3			2			2			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	23.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	34	0	10	34	0	16	30	0	16	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	20	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	45	35	35	45	37	37	36	26	26	36	23	23
g / C, Green / Cycle	0.50	0.39	0.39	0.50	0.41	0.41	0.40	0.29	0.29	0.40	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.13	0.38	0.06	0.24	0.43	0.06	0.20	0.22	0.23	0.13	0.21	0.22
s, saturation flow rate [veh/h]	540	3547	1505	650	3547	1451	1015	1900	1732	903	1900	1783
c, Capacity [veh/h]	251	1371	582	290	1441	590	386	554	505	341	486	456
d1, Uniform Delay [s]	20.18	27.33	17.95	20.11	26.75	16.87	21.18	29.09	29.34	20.07	31.69	31.88
k, delay calibration	0.46	0.50	0.50	0.50	0.50	0.50	0.50	0.18	0.20	0.11	0.18	0.19
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.65	20.32	0.51	7.26	41.42	0.51	4.85	3.68	4.86	0.60	5.97	7.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

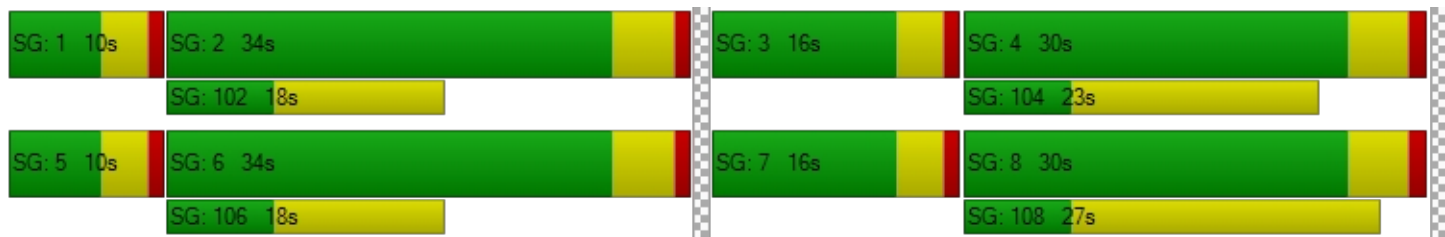
X, volume / capacity	0.29	0.98	0.14	0.55	1.06	0.14	0.52	0.76	0.79	0.35	0.83	0.85
d, Delay for Lane Group [s/veh]	22.83	47.65	18.46	27.37	68.17	17.38	26.03	32.78	34.20	20.68	37.66	39.33
Lane Group LOS	C	D	B	C	F	B	C	C	C	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.92	17.37	1.18	2.29	22.80	1.16	3.22	8.52	8.21	1.61	8.88	8.73
50th-Percentile Queue Length [ft]	22.95	434.25	29.41	57.30	569.88	29.07	80.40	213.00	205.19	40.16	222.06	218.20
95th-Percentile Queue Length [veh]	1.65	24.21	2.12	4.13	31.92	2.09	5.79	13.31	12.91	2.89	13.77	13.57
95th-Percentile Queue Length [ft]	41.32	605.13	52.94	103.14	798.05	52.32	144.73	332.68	322.65	72.28	344.25	339.33

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.83	47.65	18.46	27.37	68.17	17.38	26.03	33.30	34.20	20.68	38.36	39.33
Movement LOS	C	D	B	C	F	B	C	C	C	C	D	D
d_A, Approach Delay [s/veh]	44.85			62.07			32.01			36.17		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	46.68											
Intersection LOS	D											
Intersection V/C	0.753											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.522

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	51	709	145	0	1092	90	82	930	70	60	920	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	709	145	0	1092	90	82	930	70	60	920	42
Peak Hour Factor	0.9871	0.9871	0.9871	1.0000	0.9242	0.9242	0.9587	0.9587	0.9587	0.9247	0.9247	0.9247
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	180	37	0	295	24	21	243	18	16	249	11
Total Analysis Volume [veh/h]	52	718	147	0	1182	97	86	970	73	65	995	45
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	118			45			43			99		
Bicycle Volume [bicycles/h]	4			2			1			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	46	46	46	46	46	46
g / C, Green / Cycle	0.38	0.38	0.38	0.38	0.38	0.51	0.51	0.51	0.51	0.51	0.51
(v / s)_j Volume / Saturation Flow Rate	0.12	0.24	0.24	0.24	0.24	0.16	0.27	0.05	0.11	0.28	0.28
s, saturation flow rate [veh/h]	437	1863	1721	3547	1747	549	3618	1523	576	1900	1855
c, Capacity [veh/h]	152	715	661	1361	670	245	1859	783	259	977	953
d1, Uniform Delay [s]	35.58	22.46	22.60	22.50	22.60	26.04	14.52	11.16	24.09	14.68	14.73
k, delay calibration	0.11	0.11	0.12	0.11	0.12	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	0.93	1.13	0.48	1.12	3.91	1.05	0.24	2.31	2.11	2.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.34	0.62	0.64	0.63	0.64	0.35	0.52	0.09	0.25	0.54	0.54
d, Delay for Lane Group [s/veh]	36.90	23.39	23.72	22.97	23.72	29.95	15.57	11.40	26.40	16.79	16.93
Lane Group LOS	D	C	C	C	C	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.12	7.52	7.16	7.12	7.27	1.75	6.41	0.76	1.20	7.11	7.04
50th-Percentile Queue Length [ft]	27.94	187.94	178.92	178.02	181.82	43.82	160.21	19.04	30.01	177.70	176.11
95th-Percentile Queue Length [veh]	2.01	12.01	11.54	11.50	11.70	3.16	10.56	1.37	2.16	11.48	11.40
95th-Percentile Queue Length [ft]	50.28	300.35	288.61	287.43	292.39	78.88	264.00	34.27	54.02	287.00	284.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	36.90	23.51	23.72	0.00	23.18	23.72	29.95	15.57	11.40	26.40	16.86	16.93
Movement LOS	D	C	C		C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	24.31			23.22			16.40			17.42		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.26											
Intersection LOS	C											
Intersection V/C	0.522											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	72.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.862

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	172	878	120	210	1252	110	338	1222	230	140	1027	163
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	172	878	120	210	1252	110	338	1222	230	140	1027	163
Peak Hour Factor	0.9225	0.9225	0.9225	0.9070	0.9070	0.9070	0.9787	0.9787	0.9787	0.9567	0.9567	0.9567
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	238	33	58	345	30	86	312	59	37	268	43
Total Analysis Volume [veh/h]	186	952	130	232	1380	121	345	1249	235	146	1073	170
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	50			124			19			41		
Bicycle Volume [bicycles/h]	5			10			2			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	33.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	0
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	0
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	0
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	0.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	0.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	0
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	39	56	12	39	54	12	39	56	11	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.45	0.10	0.33	0.47	0.09	0.32	0.32
(v / s)_j Volume / Saturation Flow Rate	0.10	0.19	0.08	0.07	0.27	0.08	0.19	0.35	0.16	0.08	0.30	0.11
s, saturation flow rate [veh/h]	1810	5074	1572	3445	5074	1515	1810	3618	1440	1774	3618	1518
c, Capacity [veh/h]	187	1633	737	356	1633	695	187	1186	683	167	1151	483
d1, Uniform Delay [s]	53.82	34.02	18.50	51.78	37.96	19.11	53.86	40.39	19.83	53.75	39.71	31.45
k, delay calibration	0.27	0.50	0.50	0.11	0.50	0.50	0.50	0.20	0.50	0.16	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	46.40	1.53	0.52	2.01	5.57	0.54	399.25	32.88	1.37	18.12	7.90	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.99	0.58	0.18	0.65	0.85	0.17	1.84	1.05	0.34	0.88	0.93	0.35
d, Delay for Lane Group [s/veh]	100.23	35.55	19.02	53.79	43.53	19.66	453.11	73.27	21.20	71.87	47.61	32.39
Lane Group LOS	F	D	B	D	D	B	F	F	C	E	D	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	7.97	7.86	2.18	3.46	13.33	2.10	26.36	22.42	4.30	5.15	16.22	3.88
50th-Percentile Queue Length [ft]	199.20	196.50	54.53	86.51	333.13	52.57	658.94	560.54	107.57	128.83	405.57	97.00
95th-Percentile Queue Length [veh]	12.60	12.46	3.93	6.23	19.31	3.78	41.64	31.25	7.70	8.88	22.83	6.98
95th-Percentile Queue Length [ft]	314.94	311.44	98.15	155.71	482.79	94.62	1040.95	781.28	192.62	221.90	570.71	174.60

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	100.23	35.55	19.02	53.79	43.53	19.66	453.11	73.27	21.20	71.87	47.61	32.39
Movement LOS	F	D	B	D	D	B	F	F	C	E	D	C
d_A, Approach Delay [s/veh]	43.34			43.24			138.23			48.30		
Approach LOS	D			D			F			D		
d_I, Intersection Delay [s/veh]	72.33											
Intersection LOS	E											
Intersection V/C	0.862											

**Sequence**



Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	174.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.128

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	2020	860	697	1636
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	2020	860	697	1636
Peak Hour Factor	1.0000	1.0000	0.9720	0.9720	0.9163	0.9163
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	520	221	190	446
Total Analysis Volume [veh/h]	0	0	2078	885	761	1786
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	2		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	40	0	50	50
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	7	7
Pedestrian Clearance [s]	0	0	10	0	10	10
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	36	36	45	85
g / C, Green / Cycle	0.40	0.40	0.50	0.95
(v / s)_i Volume / Saturation Flow Rate	0.65	0.62	0.48	0.56
s, saturation flow rate [veh/h]	3192	1421	1597	3192
c, Capacity [veh/h]	1261	562	803	3025
d1, Uniform Delay [s]	27.21	27.21	21.26	0.28
k, delay calibration	0.50	0.50	0.36	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	295.08	267.67	16.91	0.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.65	1.58	0.95	0.59
d, Delay for Lane Group [s/veh]	322.29	294.88	38.16	1.13
Lane Group LOS	F	F	D	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	64.42	53.10	17.34	0.36
50th-Percentile Queue Length [ft]	1610.58	1327.48	433.51	8.97
95th-Percentile Queue Length [veh]	100.87	83.12	24.17	0.65
95th-Percentile Queue Length [ft]	2521.63	2077.98	604.25	16.14

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	322.29	294.88	38.16	1.13
Movement LOS			F	F	D	A
d_A, Approach Delay [s/veh]	0.00		314.10		12.20	
Approach LOS	A		F		B	
d_I, Intersection Delay [s/veh]	174.55					
Intersection LOS	F					
Intersection V/C	1.128					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	58.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.853

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	80	1691	70	93	1574	60	180	370	93	90	320	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	1691	70	93	1574	60	180	370	93	90	320	130
Peak Hour Factor	0.9228	0.9228	0.9228	0.9003	0.9003	0.9003	0.8841	0.8841	0.8841	0.9419	0.9419	0.9419
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	458	19	26	437	17	51	105	26	24	85	35
Total Analysis Volume [veh/h]	87	1833	76	103	1748	67	204	419	105	96	340	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	144			36			95			34		
Bicycle Volume [bicycles/h]	0			3			6			3		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	150
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	127.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	83	0	17	100	0	0	50	0	0	50	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	150	150	150	150	150	150	150	150	150	150	150	150
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	81	81	81	95	95	95	45	45	45	45	45	45
g / C, Green / Cycle	0.54	0.54	0.54	0.64	0.64	0.64	0.30	0.30	0.30	0.30	0.30	0.30
(v / s)_j Volume / Saturation Flow Rate	0.35	0.57	0.05	0.25	0.55	0.05	0.25	0.13	0.08	0.11	0.15	0.17
s, saturation flow rate [veh/h]	247	3192	1425	407	3192	1384	816	3192	1352	860	1676	1357
c, Capacity [veh/h]	69	1721	768	206	2030	880	169	966	409	207	508	411
d1, Uniform Delay [s]	73.06	34.53	16.81	36.81	21.97	10.44	66.96	41.94	39.50	56.12	42.79	43.82
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.34	0.11	0.11	0.11	0.11	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	196.13	41.34	0.26	8.43	5.09	0.17	123.40	0.31	0.33	1.62	0.74	1.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.27	1.06	0.10	0.50	0.86	0.08	1.20	0.43	0.26	0.46	0.49	0.56
d, Delay for Lane Group [s/veh]	269.18	75.87	17.06	45.24	27.06	10.61	190.36	42.24	39.82	57.75	43.53	45.30
Lane Group LOS	F	F	B	D	C	B	F	D	D	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	No
50th-Percentile Queue Length [veh]	6.40	40.33	1.36	1.86	25.16	0.91	12.38	6.35	3.02	3.45	7.76	7.37
50th-Percentile Queue Length [ft]	160.12	1008.20	34.09	46.47	628.99	22.65	309.39	158.73	75.38	86.32	193.95	184.26
95th-Percentile Queue Length [veh]	11.53	53.45	2.45	3.35	33.39	1.63	20.03	10.48	5.43	6.21	12.33	11.82
95th-Percentile Queue Length [ft]	288.22	1336.24	61.35	83.65	834.65	40.76	500.85	262.05	135.68	155.37	308.14	295.56

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	269.18	75.87	17.06	45.24	27.06	10.61	190.36	42.24	39.82	57.75	44.00	45.30
Movement LOS	F	F	B	D	C	B	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	82.06			27.46			83.40			46.61		
Approach LOS	F			C			F			D		
d_I, Intersection Delay [s/veh]	58.27											
Intersection LOS	E											
Intersection V/C	0.853											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	103	946	70	110	1267	60	100	520	90	110	480	103
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	946	70	110	1267	60	100	520	90	110	480	103
Peak Hour Factor	0.9831	0.9831	0.9831	0.9306	0.9306	0.9306	0.9738	0.9738	0.9738	0.9811	0.9811	0.9811
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	241	18	30	340	16	26	134	23	28	122	26
Total Analysis Volume [veh/h]	105	962	71	118	1362	64	103	534	92	112	489	105
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	18			16			33			10		
Bicycle Volume [bicycles/h]	8			7			8			5		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	51	0	0	51	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	52	52	52	52	52
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.47	0.47	0.47	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.31	0.21	0.22	0.24	0.30	0.30	0.14	0.32	0.07	0.14	0.37
s, saturation flow rate [veh/h]	337	3192	1612	489	3192	1634	738	1676	1403	780	1621
c, Capacity [veh/h]	127	1413	714	196	1413	724	182	794	664	234	768
d1, Uniform Delay [s]	49.02	21.74	21.78	39.05	24.23	24.26	45.29	22.36	16.31	39.48	24.06
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.15	0.04	0.04	0.24
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	42.86	1.19	2.37	13.03	2.51	4.86	1.02	1.38	0.03	0.56	3.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

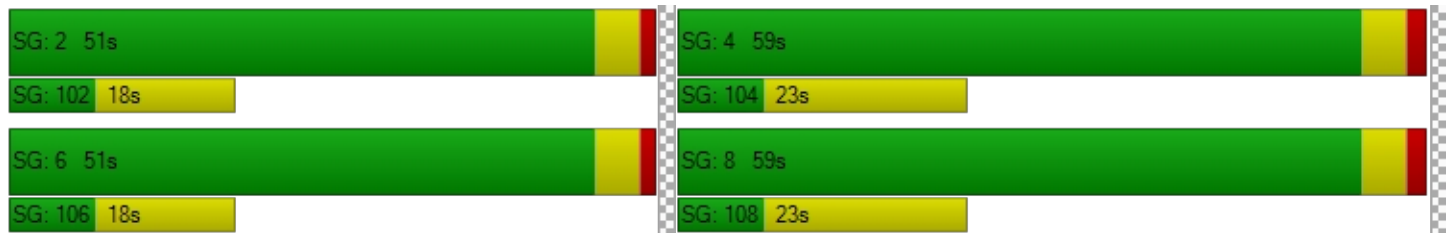
X, volume / capacity	0.82	0.48	0.49	0.60	0.67	0.67	0.57	0.67	0.14	0.48	0.77
d, Delay for Lane Group [s/veh]	91.88	22.94	24.15	52.08	26.74	29.11	46.31	23.74	16.35	40.05	27.70
Lane Group LOS	F	C	C	D	C	C	D	C	B	D	C
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.42	6.40	6.75	3.75	9.95	10.69	2.79	10.65	1.31	2.79	13.15
50th-Percentile Queue Length [ft]	110.58	160.09	168.64	93.68	248.70	267.33	69.63	266.15	32.65	69.81	328.76
95th-Percentile Queue Length [veh]	7.87	10.55	11.01	6.75	15.12	16.06	5.01	16.00	2.35	5.03	19.10
95th-Percentile Queue Length [ft]	196.80	263.84	275.13	168.63	378.02	401.40	125.33	399.93	58.76	125.65	477.44

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	91.88	23.29	24.15	52.08	27.47	29.11	46.31	23.74	16.35	40.05	27.70	27.70
Movement LOS	F	C	C	D	C	C	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	29.67			29.42			26.00			29.66		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.92											
Intersection LOS	C											
Intersection V/C	0.678											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	103.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.169

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	330	250	50	450	60	850	1660	50	30	776	270
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	330	250	50	450	60	850	1660	50	30	776	270
Peak Hour Factor	0.8774	0.8774	0.8774	0.8220	0.8220	0.8220	0.9385	0.9385	0.9385	0.8945	0.8945	0.8945
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	94	71	15	137	18	226	442	13	8	217	75
Total Analysis Volume [veh/h]	46	376	285	61	547	73	906	1769	53	34	867	302
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	7			0			21			3		
Bicycle Volume [bicycles/h]	5			4			11			12		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.9	3.0	3.0	3.9	0.0	3.0	4.3	0.0	3.0	4.3	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	20	40	20	20	40	0	20	40	0	20	40	20
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	0.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	44	35	55	44	27	27	67	60	60	67	47	63
g / C, Green / Cycle	0.36	0.29	0.46	0.36	0.23	0.23	0.56	0.50	0.50	0.56	0.39	0.53
(v / s)_j Volume / Saturation Flow Rate	0.04	0.12	0.18	0.06	0.20	0.20	0.94	0.48	0.48	0.09	0.24	0.19
s, saturation flow rate [veh/h]	1061	3080	1570	1084	1618	1544	960	1900	1879	379	3618	1581
c, Capacity [veh/h]	318	898	728	382	371	354	501	945	935	179	1422	842
d1, Uniform Delay [s]	28.16	34.31	21.12	26.79	44.33	44.43	33.57	29.11	29.42	27.49	29.09	16.22
k, delay calibration	0.11	0.11	0.47	0.11	0.17	0.17	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.31	1.50	0.19	8.46	9.48	371.92	21.67	23.89	2.33	1.96	1.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

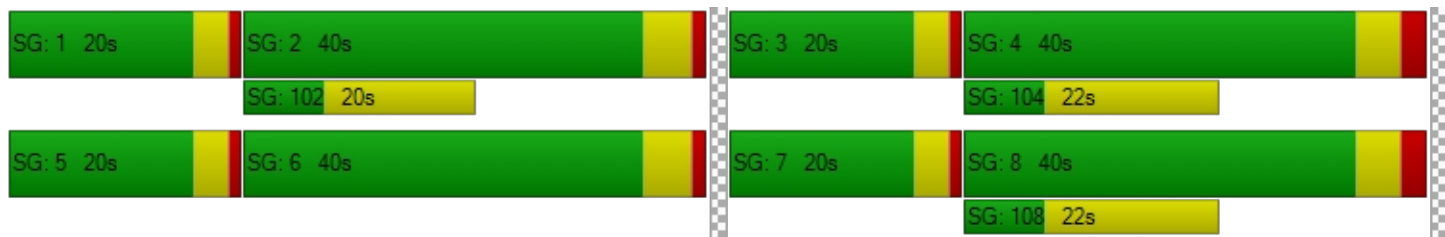
X, volume / capacity	0.14	0.42	0.39	0.16	0.85	0.86	1.81	0.96	0.97	0.19	0.61	0.36
d, Delay for Lane Group [s/veh]	28.36	34.62	22.62	26.99	52.80	53.92	405.49	50.78	53.31	29.82	31.04	17.41
Lane Group LOS	C	C	C	C	D	D	F	D	D	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.89	4.43	5.45	1.21	9.83	9.58	59.72	29.12	29.88	0.52	10.14	4.93
50th-Percentile Queue Length [ft]	22.36	110.82	136.35	30.23	245.76	239.43	1492.90	727.95	746.99	13.08	253.49	123.34
95th-Percentile Queue Length [veh]	1.61	7.89	9.28	2.18	14.97	14.65	99.11	37.97	38.84	0.94	15.36	8.58
95th-Percentile Queue Length [ft]	40.25	197.14	232.10	54.42	374.31	366.32	2477.69	949.19	971.10	23.55	384.04	214.41

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	28.36	34.62	22.62	26.99	53.27	53.92	405.49	52.01	53.31	29.82	31.04	17.41
Movement LOS	C	C	C	C	D	D	F	D	D	C	C	B
d_A, Approach Delay [s/veh]	29.37			50.99			169.43			27.58		
Approach LOS	C			D			F			C		
d_I, Intersection Delay [s/veh]	103.57											
Intersection LOS	F											
Intersection V/C	1.169											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕⊕			⊕⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	100	82	80	110	50	70	861	20	20	779	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	100	82	80	110	50	70	861	20	20	779	10
Peak Hour Factor	0.8491	0.8491	0.8491	0.8726	0.8726	0.8726	0.9069	0.9069	0.9069	0.9393	0.9393	0.9393
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	29	24	23	32	14	19	237	6	5	207	3
Total Analysis Volume [veh/h]	35	118	97	92	126	57	77	949	22	21	829	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	25			25			28			14		
Bicycle Volume [bicycles/h]	7			2			14			20		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	24	24	57	57	57	57
g / C, Green / Cycle	0.27	0.27	0.63	0.63	0.63	0.63
(v / s)_i Volume / Saturation Flow Rate	0.18	0.25	0.38	0.38	0.28	0.28
s, saturation flow rate [veh/h]	1408	1099	1276	1512	1601	1516
c, Capacity [veh/h]	423	348	850	952	1050	954
d1, Uniform Delay [s]	28.84	32.31	9.32	9.89	8.38	8.53
k, delay calibration	0.11	0.26	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.32	9.10	2.70	2.77	1.24	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.59	0.79	0.56	0.60	0.42	0.44
d, Delay for Lane Group [s/veh]	30.15	41.41	12.02	12.66	9.62	10.00
Lane Group LOS	C	D	B	B	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	4.77	6.62	4.77	6.34	4.06	3.96
50th-Percentile Queue Length [ft]	119.36	165.60	119.31	158.58	101.44	98.88
95th-Percentile Queue Length [veh]	8.36	10.85	8.35	10.47	7.30	7.12
95th-Percentile Queue Length [ft]	208.95	271.13	208.87	261.84	182.59	177.99

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.15	30.15	30.15	41.41	41.41	41.41	12.02	12.39	12.66	9.62	9.81	10.00
Movement LOS	C	C	C	D	D	D	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	30.15			41.41			12.37			9.81		
Approach LOS	C			D			B			A		
d_I, Intersection Delay [s/veh]	16.57											
Intersection LOS	B											
Intersection V/C	0.626											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	43.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗ ↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	614	741	0	36	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	614	741	0	36	42
Peak Hour Factor	1.0000	0.9494	0.9085	1.0000	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	162	204	0	10	12
Total Analysis Volume [veh/h]	0	647	816	0	41	48
Pedestrian Volume [ped/h]	6		5		22	



**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.31	0.13
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	43.21	16.66
Movement LOS		A	A		E	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	1.20	0.46
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	29.92	11.53
d_A, Approach Delay [s/veh]	0.00		0.00		28.89	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.66					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	8	481	398	16	123	88
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	481	398	16	123	88
Peak Hour Factor	1.0000	0.9299	0.9060	1.0000	0.5303	0.5303
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	129	110	4	58	41
Total Analysis Volume [veh/h]	8	517	439	16	232	166
Pedestrian Volume [ped/h]	15		2		22	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.38	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.56	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.13		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	A					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.442

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	20	273	10	10	282	30	10	0	0	10	10	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	273	10	10	282	30	10	0	0	10	10	41
Peak Hour Factor	0.8827	0.8827	0.8827	0.9531	0.9531	0.9531	0.2500	0.2500	0.2500	0.7222	0.7222	0.7222
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	77	3	3	74	8	10	0	0	3	3	14
Total Analysis Volume [veh/h]	23	309	11	10	296	31	40	0	0	14	14	57
Pedestrian Volume [ped/h]	33			30			12			7		

**Intersection Settings****Lanes**

Capacity per Entry Lane [veh/h]	777	783	619	697
Degree of Utilization, x	0.44	0.43	0.06	0.12

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.28	2.18	0.21	0.41
95th-Percentile Queue Length [ft]	56.93	54.61	5.17	10.36
Approach Delay [s/veh]	11.25	11.04	9.22	8.88
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.81			
Intersection LOS	B			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.484

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	21	260	0	10	257	20	10	10	10	10	0	81
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	260	0	10	257	20	10	10	10	10	0	81
Peak Hour Factor	0.8012	0.8012	0.8012	0.9444	0.9444	0.9444	0.3500	0.3500	0.3500	0.6458	0.6458	0.6458
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	81	0	3	68	5	7	7	7	4	0	31
Total Analysis Volume [veh/h]	26	325	0	11	272	21	29	29	29	15	0	125
Pedestrian Volume [ped/h]	8			11			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	725	722	636	695
Degree of Utilization, x	0.48	0.42	0.14	0.20

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	2.67	2.10	0.47	0.75
95th-Percentile Queue Length [ft]	66.66	52.38	11.81	18.74
Approach Delay [s/veh]	12.55	11.55	9.56	9.49
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	11.42			
Intersection LOS	B			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.392

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	16	0	8	4	5	240	20	36	312	10
Total Analysis Volume [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	87	87	96	89	89
g / C, Green / Cycle	0.12	0.12	0.12	0.12	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_j Volume / Saturation Flow Rate	0.03	0.04	0.00	0.03	0.04	0.28	0.28	0.22	0.35	0.35
s, saturation flow rate [veh/h]	1309	1480	1339	1728	501	1870	1808	641	1870	1845
c, Capacity [veh/h]	164	180	146	210	434	1351	1306	545	1389	1370
d1, Uniform Delay [s]	52.18	48.37	0.00	47.55	3.54	6.44	6.46	3.51	6.07	6.09
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.43	0.00	0.19	0.21	0.85	0.89	1.16	1.12	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.35	0.00	0.21	0.05	0.39	0.39	0.26	0.47	0.47
d, Delay for Lane Group [s/veh]	52.41	48.81	0.00	47.74	3.75	7.29	7.34	4.67	7.19	7.23
Lane Group LOS	D	D	A	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.98	1.76	0.00	1.23	0.10	4.99	4.88	0.75	6.06	6.03
50th-Percentile Queue Length [ft]	24.51	43.95	0.00	30.75	2.62	124.74	122.06	18.78	151.54	150.82
95th-Percentile Queue Length [veh]	1.76	3.16	0.00	2.21	0.19	8.65	8.51	1.35	10.10	10.06
95th-Percentile Queue Length [ft]	44.11	79.11	0.00	55.36	4.71	216.32	212.65	33.80	252.49	251.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.41	48.81	48.81	0.00	47.74	47.74	3.75	7.31	7.34	4.67	7.21	7.23
Movement LOS	D	D	D	A	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	50.07			47.74			7.24			6.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.36											
Intersection LOS	A											
Intersection V/C	0.392											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	221.30	471.59	587.25	567.55
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.217	2.011	2.821	2.791
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.720	1.634	2.433	2.738
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	24	52	0	747	562	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	52	0	747	562	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	13	0	187	141	0
Total Analysis Volume [veh/h]	24	52	0	747	562	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.14	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	30.04	12.98	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh]	0.49	0.34	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	12.20	8.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.37		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.516

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	38	0	0	0	4	230	20	59	368	12
Total Analysis Volume [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	14	14		96	85	85	96	89	89
g / C, Green / Cycle	0.12	0.12		0.80	0.71	0.71	0.80	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10		0.04	0.27	0.27	0.34	0.41	0.41
s, saturation flow rate [veh/h]	1691	1478		427	1870	1805	686	1870	1844
c, Capacity [veh/h]	201	176		368	1322	1276	576	1386	1366
d1, Uniform Delay [s]	48.02	51.88		4.60	7.07	7.08	4.04	6.78	6.83
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	4.85		0.22	0.84	0.88	2.12	1.57	1.63
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.86		0.04	0.38	0.39	0.41	0.55	0.55
d, Delay for Lane Group [s/veh]	48.27	56.73		4.82	7.91	7.97	6.17	8.35	8.45
Lane Group LOS	D	E		A	A	A	A	A	A
Critical Lane Group	No	Yes		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.43	4.72		0.08	5.08	4.97	1.32	7.96	8.00
50th-Percentile Queue Length [ft]	35.85	118.05		2.04	127.09	124.16	32.99	199.01	199.88
95th-Percentile Queue Length [veh]	2.58	8.29		0.15	8.78	8.62	2.38	12.59	12.63
95th-Percentile Queue Length [ft]	64.54	207.14		3.67	219.53	215.53	59.38	314.69	315.81



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	48.27	56.73	56.73	0.00	0.00	0.00	4.82	7.94	7.97	6.17	8.40	8.45
Movement LOS	D	E	E				A	A	A	A	A	A
d_A, Approach Delay [s/veh]	54.58			0.00			7.89			8.10		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	11.22											
Intersection LOS	B											
Intersection V/C	0.516											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	96.46	386.92	79.30
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.363	1.518	2.808	2.864
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.896	4.132	2.397	3.006
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	3	1	2	601	789	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	2	601	789	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	150	197	1
Total Analysis Volume [veh/h]	3	1	2	601	789	5
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	29.76	14.67	9.44	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.06	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	1.54	0.20	0.19	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	25.98		0.03		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.392

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	16	0	8	4	5	240	20	36	312	10
Total Analysis Volume [veh/h]	34	0	63	0	31	14	21	959	79	142	1246	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	92.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	15	15	15	15	96	87	87	96	89	89
g / C, Green / Cycle	0.12	0.12	0.12	0.12	0.80	0.72	0.72	0.80	0.74	0.74
(v / s)_i Volume / Saturation Flow Rate	0.03	0.04	0.00	0.03	0.04	0.28	0.28	0.22	0.35	0.35
s, saturation flow rate [veh/h]	1309	1480	1339	1728	501	1870	1808	641	1870	1845
c, Capacity [veh/h]	164	180	146	210	434	1351	1306	545	1389	1370
d1, Uniform Delay [s]	52.18	48.37	0.00	47.55	3.54	6.44	6.46	3.51	6.07	6.09
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.43	0.00	0.19	0.21	0.85	0.89	1.16	1.12	1.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.35	0.00	0.21	0.05	0.39	0.39	0.26	0.47	0.47
d, Delay for Lane Group [s/veh]	52.41	48.81	0.00	47.74	3.75	7.29	7.34	4.67	7.19	7.23
Lane Group LOS	D	D	A	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.98	1.76	0.00	1.23	0.10	4.99	4.88	0.75	6.06	6.03
50th-Percentile Queue Length [ft/ln]	24.51	43.95	0.00	30.75	2.62	124.74	122.06	18.78	151.54	150.82
95th-Percentile Queue Length [veh/ln]	1.76	3.16	0.00	2.21	0.19	8.65	8.51	1.35	10.10	10.06
95th-Percentile Queue Length [ft/ln]	44.11	79.11	0.00	55.36	4.71	216.32	212.65	33.80	252.49	251.52

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	52.41	48.81	48.81	0.00	47.74	47.74	3.75	7.31	7.34	4.67	7.21	7.23
Movement LOS	D	D	D	A	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	50.07			47.74			7.24			6.96		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	9.36											
Intersection LOS	A											
Intersection V/C	0.392											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	221.30	471.59	587.25	567.55
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.217	2.011	2.821	2.791
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.720	1.634	2.433	2.738
Bicycle LOS	A	A	B	B

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	24	52	0	747	562	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	52	0	747	562	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	13	0	187	141	0
Total Analysis Volume [veh/h]	24	52	0	747	562	0
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.14	0.10	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	30.04	12.98	0.00	0.00	0.00	0.00
Movement LOS	D	B		A	A	
95th-Percentile Queue Length [veh/ln]	0.49	0.34	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	12.20	8.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.37		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	0	38	0	0	0	4	230	20	59	368	12
Total Analysis Volume [veh/h]	52	0	152	0	0	0	16	919	80	234	1470	49
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	96.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18		93	82	82	93	86	86
g / C, Green / Cycle	0.15	0.15		0.78	0.68	0.68	0.78	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.03	0.10		0.04	0.27	0.27	0.34	0.41	0.41
s, saturation flow rate [veh/h]	1708	1495		430	1870	1805	690	1870	1844
c, Capacity [veh/h]	250	219		352	1271	1226	555	1335	1316
d1, Uniform Delay [s]	45.07	48.64		5.76	8.45	8.47	5.08	8.29	8.35
k, delay calibration	0.04	0.04		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	1.49		0.24	0.94	0.98	2.35	1.77	1.84
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.21	0.69		0.05	0.40	0.40	0.42	0.57	0.58
d, Delay for Lane Group [s/veh]	45.22	50.12		6.00	9.38	9.45	7.43	10.06	10.19
Lane Group LOS	D	D		A	A	A	A	B	B
Critical Lane Group	No	Yes		Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	4.41		0.10	5.74	5.61	1.59	9.19	9.23
50th-Percentile Queue Length [ft/ln]	34.53	110.37		2.43	143.46	140.15	39.69	229.63	230.64
95th-Percentile Queue Length [veh/ln]	2.49	7.86		0.18	9.67	9.49	2.86	14.16	14.21
95th-Percentile Queue Length [ft/ln]	62.16	196.52		4.38	241.68	237.23	71.44	353.89	355.17

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	45.22	50.12	50.12	0.00	0.00	0.00	6.00	9.42	9.45	7.43	10.12	10.19
Movement LOS	D	D	D				A	A	A	A	B	B
d_A, Approach Delay [s/veh]	48.87			0.00			9.36			9.77		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	12.31											
Intersection LOS	B											
Intersection V/C	0.515											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	0.00	97.57	386.92	79.30
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.354	1.517	2.808	2.864
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	1.896	4.132	2.397	3.006
Bicycle LOS	A	D	B	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	3	1	2	601	789	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	2	601	789	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	150	197	1
Total Analysis Volume [veh/h]	3	1	2	601	789	5
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	29.76	14.67	9.44	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.54	0.20	0.19	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	25.98		0.03		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 2: OCEAN AVENUE/CALIFORNIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	63.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.238

**Intersection Setup**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↕↔			↕↔			↔↕↔			↔↕↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	California Incline			California Ave			Ocean Ave			Ocean Ave		
Base Volume Input [veh/h]	40	82	238	60	125	70	372	450	80	20	410	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	82	238	60	125	70	372	450	80	20	410	40
Peak Hour Factor	0.8342	0.8342	0.8342	0.7828	0.7828	0.7828	0.9128	0.9128	0.9128	0.8750	0.8750	0.8750
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	25	71	19	40	22	102	123	22	6	117	11
Total Analysis Volume [veh/h]	48	98	285	77	160	89	408	493	88	23	469	46
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	159			85			66			18		
Bicycle Volume [bicycles/h]	23			16			14			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	3	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups			2,3									
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	15	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	32	23	32	32	32	23	45	45	13	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	0	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	20	20	0	20	20	20	0	16	16	0	16	16
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6
Minimum Recall		No	No		No		No	Yes		No	Yes	
Maximum Recall		No	No		No		No	No		No	No	
Pedestrian Recall		No	No		No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	2.00	4.60	4.60	2.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	27	57	27	27	29	50	50	3	24	24
g / C, Green / Cycle	0.30	0.63	0.30	0.30	0.33	0.56	0.56	0.03	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.49	0.19	0.77	0.06	0.23	0.26	0.06	0.02	0.25	0.04
s, saturation flow rate [veh/h]	296	1534	310	1505	1810	1900	1449	1509	1900	1107
c, Capacity [veh/h]	143	967	147	455	594	1066	813	52	507	295
d1, Uniform Delay [s]	29.83	7.53	30.01	23.28	26.19	11.71	9.23	42.59	32.10	25.23
k, delay calibration	0.50	0.05	0.50	0.04	0.50	0.50	0.50	0.04	0.19	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	81.93	0.08	306.72	0.08	6.34	1.44	0.27	2.18	12.29	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

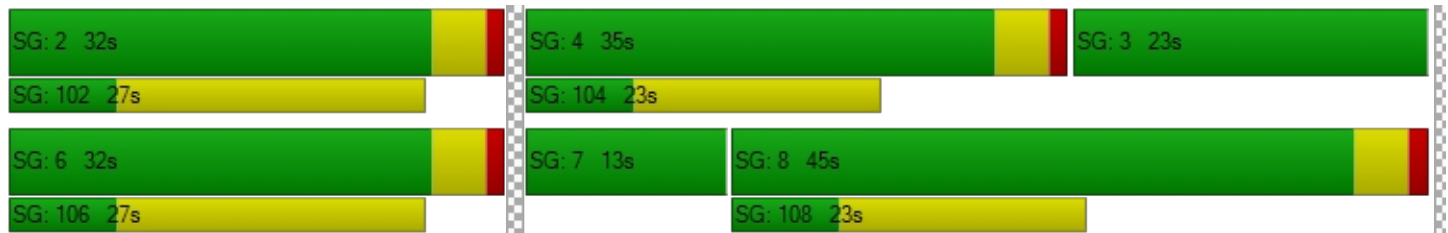
X, volume / capacity	1.02	0.29	1.62	0.20	0.69	0.46	0.11	0.44	0.92	0.16
d, Delay for Lane Group [s/veh]	111.76	7.61	336.72	23.35	32.53	13.16	9.50	44.77	44.39	25.32
Lane Group LOS	F	A	F	C	C	B	A	D	D	C
Critical Lane Group	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	6.43	2.32	15.70	1.36	8.38	5.83	0.82	0.53	11.35	0.75
50th-Percentile Queue Length [ft]	160.72	58.04	392.42	34.07	209.58	145.69	20.51	13.20	283.65	18.71
95th-Percentile Queue Length [veh]	10.73	4.18	27.27	2.45	13.13	9.79	1.48	0.95	16.87	1.35
95th-Percentile Queue Length [ft]	268.13	104.46	681.63	61.32	328.30	244.67	36.93	23.76	421.76	33.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	111.76	111.76	7.61	336.72	336.72	23.35	32.53	13.16	9.50	44.77	44.39	25.32
Movement LOS	F	F	A	F	F	C	C	B	A	D	D	C
d_A, Approach Delay [s/veh]	42.89			251.17			20.82			42.78		
Approach LOS	D			F			C			D		
d_I, Intersection Delay [s/veh]	63.04											
Intersection LOS	E											
Intersection V/C	1.238											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 56: LINCOLN BOULEVARD/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.553

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			35.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	50	908	80	210	702	50	290	350	250	40	190	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	908	80	210	702	50	290	350	250	40	190	30
Peak Hour Factor	0.9185	0.9185	0.9185	0.9512	0.9512	0.9512	0.9361	0.9361	0.9361	0.8598	0.8598	0.8598
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	247	22	55	185	13	77	93	67	12	55	9
Total Analysis Volume [veh/h]	54	989	87	221	738	53	310	374	267	47	221	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			47			100			83		
Bicycle Volume [bicycles/h]	3			3			10			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	3	2	3	1	6	6	3	8	1	4	4	4
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	15	30	15	15	30	30	15	30	15	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	19	21	19	13	34	34	19	56	13	37	37	37
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	0	7	7	7
Pedestrian Clearance [s]	0	10	0	0	18	18	0	21	0	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes		No	Yes		No	No			No	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	40	40	40	41	41	41	24	24	24
g / C, Green / Cycle	0.30	0.30	0.30	0.45	0.45	0.45	0.45	0.45	0.45	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.08	0.27	0.06	0.24	0.20	0.04	0.22	0.20	0.17	0.05	0.07	0.07
s, saturation flow rate [veh/h]	709	3618	1436	915	3618	1433	1390	1900	1538	1005	1900	1776
c, Capacity [veh/h]	181	1099	436	381	1623	643	677	854	691	180	495	462
d1, Uniform Delay [s]	35.84	30.07	23.26	19.87	17.22	14.23	16.71	17.01	16.53	38.34	26.47	26.55
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.16	11.70	1.02	6.33	0.92	0.25	2.23	0.13	0.13	0.28	0.10	0.12
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.30	0.90	0.20	0.58	0.45	0.08	0.46	0.44	0.39	0.26	0.26	0.27
d, Delay for Lane Group [s/veh]	40.00	41.77	24.28	26.19	18.14	14.48	18.93	17.14	16.67	38.63	26.57	26.67
Lane Group LOS	D	D	C	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.29	11.68	1.47	3.36	5.17	0.63	4.49	5.10	3.54	0.97	2.15	2.11
50th-Percentile Queue Length [ft]	32.37	292.06	36.77	84.05	129.17	15.84	112.25	127.48	88.53	24.26	53.79	52.64
95th-Percentile Queue Length [veh]	2.33	17.29	2.65	6.05	8.89	1.14	7.97	8.80	6.37	1.75	3.87	3.79
95th-Percentile Queue Length [ft]	58.27	432.20	66.19	151.30	222.36	28.51	199.13	220.06	159.36	43.66	96.83	94.75

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	40.00	41.77	24.28	26.19	18.14	14.48	18.93	17.14	16.67	38.63	26.61	26.67
Movement LOS	D	D	C	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	40.34			19.71			17.59			28.48		
Approach LOS	D			B			B			C		
d_I, Intersection Delay [s/veh]	26.76											
Intersection LOS	C											
Intersection V/C	0.553											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 57: LINCOLN BOULEVARD/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↔↔			↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	10	151	130	40	179	50	100	860	60	20	500	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	151	130	40	179	50	100	860	60	20	500	20
Peak Hour Factor	0.8816	0.8816	0.8816	0.8768	0.8768	0.8768	0.9567	0.9567	0.9567	0.8309	0.8309	0.8309
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	43	37	11	51	14	26	225	16	6	150	6
Total Analysis Volume [veh/h]	11	171	147	46	204	57	105	899	63	24	602	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	46			45			64			38		
Bicycle Volume [bicycles/h]	6			4			37			21		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	6	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	15	35	35	15	35	35
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	0	14	14	0	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	23	58	50	50	58	47	47
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.64	0.55	0.55	0.64	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate	0.10	0.10	0.04	0.14	0.11	0.26	0.26	0.03	0.17	0.17
s, saturation flow rate [veh/h]	1860	1470	1187	1802	969	1900	1831	715	1900	1860
c, Capacity [veh/h]	520	378	169	463	666	1053	1015	488	983	963
d1, Uniform Delay [s]	27.47	27.60	40.04	29.05	6.61	12.01	12.07	6.96	12.56	12.58
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	0.24	0.32	0.40	0.04	1.46	1.55	0.19	0.86	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

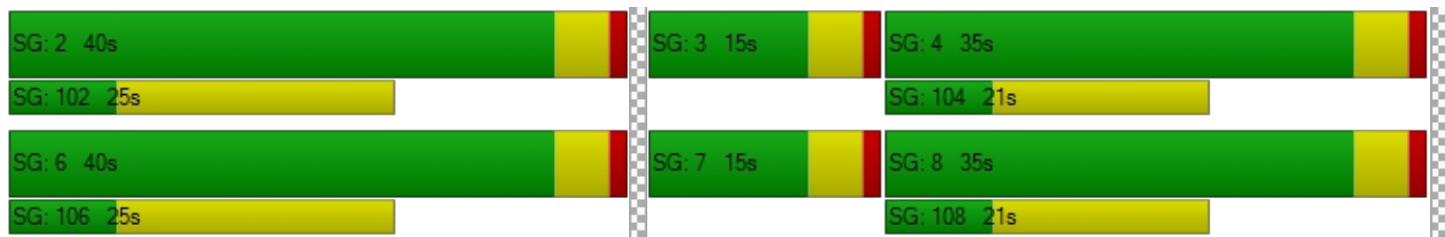
X, volume / capacity	0.35	0.39	0.27	0.56	0.16	0.46	0.47	0.05	0.32	0.32
d, Delay for Lane Group [s/veh]	27.62	27.84	40.36	29.45	6.65	13.47	13.62	7.15	13.42	13.47
Lane Group LOS	C	C	D	C	A	B	B	A	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.13	2.55	0.97	4.77	0.69	5.83	5.74	0.17	3.70	3.67
50th-Percentile Queue Length [ft]	78.34	63.77	24.31	119.27	17.19	145.63	143.49	4.35	92.51	91.70
95th-Percentile Queue Length [veh]	5.64	4.59	1.75	8.35	1.24	9.78	9.67	0.31	6.66	6.60
95th-Percentile Queue Length [ft]	141.01	114.79	43.76	208.82	30.93	244.58	241.72	7.84	166.52	165.07

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	27.62	27.62	27.84	40.36	29.45	29.45	6.65	13.54	13.62	7.15	13.45	13.47
Movement LOS	C	C	C	D	C	C	A	B	B	A	B	B
d_A, Approach Delay [s/veh]	27.72			31.08			12.86			13.22		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.41											
Intersection LOS	B											
Intersection V/C	0.410											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 58: LINCOLN BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.559

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	30	515	190	95	388	180	150	800	194	50	600	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	515	190	95	388	180	150	800	194	50	600	50
Peak Hour Factor	0.9446	0.9446	0.9446	0.9443	0.9443	0.9443	0.9691	0.9691	0.9691	0.9074	0.9074	0.9074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	136	50	25	103	48	39	206	50	14	165	14
Total Analysis Volume [veh/h]	32	545	201	101	411	191	155	826	200	55	661	55
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			62			55			69		
Bicycle Volume [bicycles/h]	4			6			11			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	55.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	1	6	6	3	8	8	7	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	15	30	30	15	30	30	15	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	39	39	39	16	55	55	15	52	52	13	50	50
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	13	13	13	0	15	15	0	14	14	0	13	13
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes		No	Yes	
Maximum Recall		No		No	No		No	No		No	No	
Pedestrian Recall		No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	42	42	42	69	58	58	69	57	57
g / C, Green / Cycle	0.25	0.25	0.25	0.35	0.35	0.35	0.57	0.49	0.49	0.57	0.48	0.48
(v / s)_j Volume / Saturation Flow Rate	0.03	0.21	0.22	0.10	0.22	0.13	0.17	0.28	0.29	0.08	0.19	0.19
s, saturation flow rate [veh/h]	990	1900	1643	968	1900	1496	895	1900	1730	713	1900	1835
c, Capacity [veh/h]	115	485	419	277	665	524	511	923	840	385	906	875
d1, Uniform Delay [s]	55.29	41.87	42.47	29.91	32.34	29.05	13.09	22.00	22.24	14.04	20.30	20.34
k, delay calibration	0.04	0.12	0.15	0.23	0.04	0.04	0.47	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	3.65	6.77	1.75	0.35	0.16	1.43	2.59	3.04	0.78	1.32	1.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

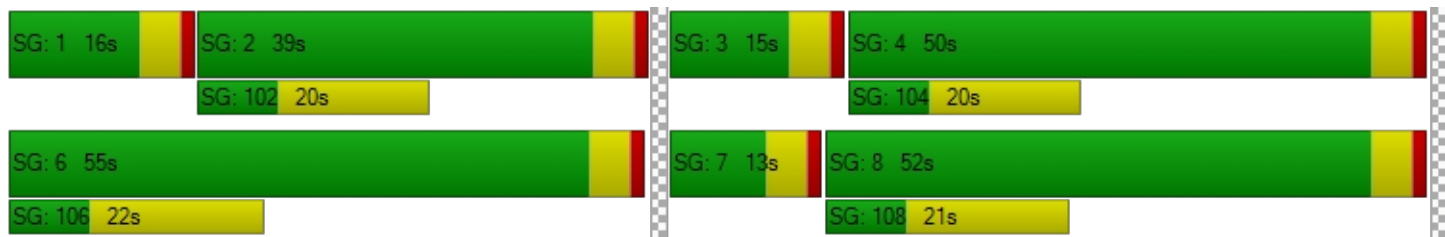
X, volume / capacity	0.28	0.80	0.85	0.37	0.62	0.36	0.30	0.57	0.59	0.14	0.40	0.40
d, Delay for Lane Group [s/veh]	55.77	45.51	49.24	31.66	32.69	29.21	14.52	24.59	25.28	14.82	21.62	21.72
Lane Group LOS	E	D	D	C	C	C	B	C	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	0.96	11.27	10.77	2.15	9.92	4.14	2.12	11.12	10.61	0.73	6.84	6.70
50th-Percentile Queue Length [ft]	24.04	281.68	269.16	53.63	248.11	103.48	53.03	278.02	265.23	18.13	171.12	167.40
95th-Percentile Queue Length [veh]	1.73	16.77	16.15	3.86	15.09	7.45	3.82	16.59	15.95	1.31	11.14	10.94
95th-Percentile Queue Length [ft]	43.27	419.30	403.69	96.53	377.27	186.26	95.46	414.74	398.78	32.63	278.39	273.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	55.77	46.58	49.24	31.66	32.69	29.21	14.52	24.84	25.28	14.82	21.67	21.72
Movement LOS	E	D	D	C	C	C	B	C	C	B	C	C
d_A, Approach Delay [s/veh]	47.64			31.59			23.56			21.18		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	30.13											
Intersection LOS	C											
Intersection V/C	0.559											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 59: LINCOLN BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	42.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.713

**Intersection Setup**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	130	420	50	160	230	80	200	944	160	50	835	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	420	50	160	230	80	200	944	160	50	835	30
Peak Hour Factor	0.8715	0.8715	0.8715	0.8910	0.8910	0.8910	0.9692	0.9692	0.9692	0.9394	0.9394	0.9394
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	120	14	45	65	22	52	243	41	13	222	8
Total Analysis Volume [veh/h]	149	482	57	180	258	90	206	974	165	53	889	32
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	73			88			104			126		
Bicycle Volume [bicycles/h]	7			9			33			31		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	4	2	4	1	6	8	3	8	2	6	4	6
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lead	-	-	Lead	-	-	Lag	-	-
Minimum Green [s]	7	7	7	5	7	7	5	7	7	7	7	7
Maximum Green [s]	30	25	30	15	25	30	15	30	25	25	30	25
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	45	43	15	60	60	17	60	45	60	43	60
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	0	7	7	0	7	7	7	7	7
Pedestrian Clearance [s]	16	17	16	0	17	16	0	16	17	17	16	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No		No	No		No	Yes			Yes	
Maximum Recall		No		No	No		No	No			No	
Pedestrian Recall		No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	10	47	47	15	63	63	43	43	43
g / C, Green / Cycle	0.27	0.27	0.27	0.09	0.40	0.40	0.13	0.53	0.53	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.14	0.25	0.04	0.10	0.14	0.06	0.11	0.31	0.32	0.11	0.24	0.25
s, saturation flow rate [veh/h]	1079	1900	1405	1810	1900	1437	1810	1900	1726	502	1900	1862
c, Capacity [veh/h]	231	514	380	157	751	568	233	1003	911	120	685	671
d1, Uniform Delay [s]	49.30	42.79	33.29	54.78	25.37	23.39	51.35	19.27	19.74	52.07	32.44	32.52
k, delay calibration	0.04	0.23	0.04	0.20	0.04	0.04	0.13	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	15.77	0.07	92.10	0.10	0.05	12.06	2.45	3.06	11.44	5.30	5.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.65	0.94	0.15	1.15	0.34	0.16	0.88	0.58	0.61	0.44	0.68	0.68
d, Delay for Lane Group [s/veh]	50.43	58.56	33.36	146.88	25.47	23.44	63.41	21.72	22.80	63.51	37.74	38.05
Lane Group LOS	D	E	C	F	C	C	E	C	C	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	4.38	15.95	1.27	8.71	5.11	1.64	6.86	11.46	11.34	1.95	12.30	12.21
50th-Percentile Queue Length [ft]	109.61	398.72	31.68	217.87	127.73	41.10	171.48	286.46	283.54	48.73	307.49	305.33
95th-Percentile Queue Length [veh]	7.82	22.50	2.28	14.22	8.82	2.96	11.15	17.01	16.86	3.51	18.05	17.94
95th-Percentile Queue Length [ft]	195.46	562.46	57.02	355.59	220.40	73.97	278.86	425.24	421.62	87.72	451.28	448.62

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	50.43	58.56	33.36	146.88	25.47	23.44	63.41	22.16	22.80	63.51	37.89	38.05
Movement LOS	D	E	C	F	C	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	54.71			66.51			28.55			39.29		
Approach LOS	D			E			C			D		
d_I, Intersection Delay [s/veh]	42.27											
Intersection LOS	D											
Intersection V/C	0.713											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 60: LINCOLN BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	31.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.775

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			┌			┌┌┌			┌┌┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Lincoln Blvd			Lincoln Blvd		
Base Volume Input [veh/h]	19	40	230	156	80	140	160	1184	240	30	935	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	40	230	156	80	140	160	1184	240	30	935	30
Peak Hour Factor	0.8098	0.8939	0.8939	0.8896	0.7917	0.7917	0.9431	0.9431	0.9431	0.8998	0.8998	0.8998
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	11	64	44	25	44	42	314	64	8	260	8
Total Analysis Volume [veh/h]	23	45	257	175	101	177	170	1255	254	33	1039	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			27			13			27		
Bicycle Volume [bicycles/h]	8			5			16			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	8	3	8	2	7	4	6
Auxiliary Signal Groups			2,3									
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	7	7	7	7	7	7	7
Maximum Green [s]	0	30	15	0	30	30	15	30	30	15	30	30
Amber [s]	0.0	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	0	40	15	0	40	65	15	65	40	15	65	40
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	7	0	7	7	0	7	7
Pedestrian Clearance [s]	0	17	0	0	17	18	0	18	17	0	18	17
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	29	29	13	72	72	5	64	64
g / C, Green / Cycle	0.25	0.25	0.11	0.60	0.60	0.04	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.19	0.23	0.09	0.40	0.42	0.02	0.45	0.28
s, saturation flow rate [veh/h]	1602	1200	1810	1900	1756	1810	1200	1871
c, Capacity [veh/h]	393	294	197	1141	1055	71	637	994
d1, Uniform Delay [s]	42.10	44.46	52.55	16.00	16.58	56.37	23.92	18.43
k, delay calibration	0.13	0.25	0.12	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.76	26.00	11.88	3.14	3.97	1.77	13.01	2.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

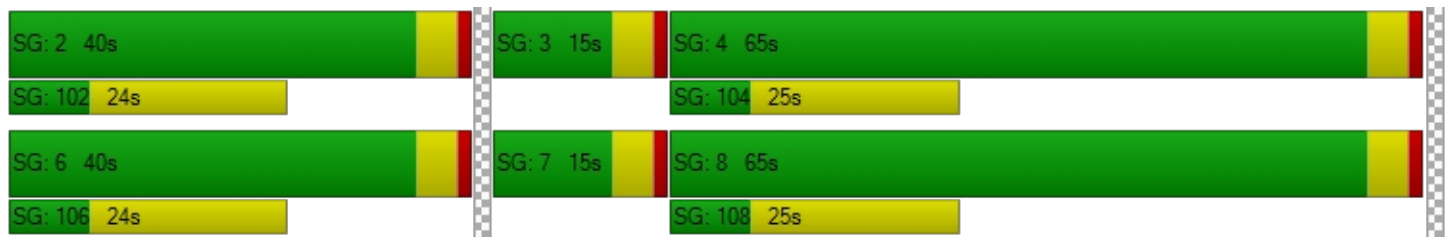
X, volume / capacity	0.77	0.95	0.86	0.67	0.71	0.47	0.85	0.54
d, Delay for Lane Group [s/veh]	45.86	70.46	64.43	19.14	20.55	58.13	36.93	20.50
Lane Group LOS	D	E	E	B	C	E	D	C
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.69	10.18	5.68	14.35	14.62	1.01	14.78	10.08
50th-Percentile Queue Length [ft]	217.33	254.42	141.96	358.70	365.42	25.35	369.39	252.01
95th-Percentile Queue Length [veh]	13.53	15.41	9.59	20.56	20.89	1.83	21.08	15.29
95th-Percentile Queue Length [ft]	338.21	385.22	239.65	514.00	522.17	45.63	526.99	382.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	45.86	45.86	0.00	70.46	70.46	64.43	19.69	20.55	58.13	29.02	20.50
Movement LOS		D	D		E	E	E	B	C	E	C	C
d_A, Approach Delay [s/veh]	45.86		70.46		24.35			29.64				
Approach LOS	D		E		C			C				
d_I, Intersection Delay [s/veh]	31.83											
Intersection LOS	C											
Intersection V/C	0.775											

**Sequence**

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 61: LINCOLN BOULEVARD/OLYMPIC/I-10 WB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	60.9
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.913

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration				↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Lincoln Blvd		
Base Volume Input [veh/h]	0	0	0	260	280	860	200	744	0	0	1195	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	260	280	860	200	744	0	0	1195	40
Peak Hour Factor	1.0000	1.0000	1.0000	0.9426	0.9426	0.9426	0.9502	0.9502	1.0000	1.0000	0.9623	0.9623
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	69	74	228	53	196	0	0	310	10
Total Analysis Volume [veh/h]	0	0	0	276	297	912	210	783	0	0	1242	42
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	40			17			0			20		
Bicycle Volume [bicycles/h]	0			4			0			1		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	4	4	4	5	2	0	0	6	6
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lag	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	7	7	7	7	7	0	0	7	7
Maximum Green [s]	0	0	0	30	30	30	15	30	0	0	30	30
Amber [s]	0.0	0.0	0.0	3.6	3.6	3.6	3.6	3.6	0.0	0.0	3.6	3.6
All red [s]	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0
Split [s]	0	0	0	40	40	40	27	80	0	0	53	53
Vehicle Extension [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Walk [s]	0	0	0	7	7	7	0	7	0	0	7	7
Pedestrian Clearance [s]	0	0	0	22	22	22	0	16	0	0	7	7
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.6	2.6	2.6	2.6	2.6	0.0	0.0	2.6	2.6
Minimum Recall					No		No	Yes			Yes	
Maximum Recall					No		No	No			No	
Pedestrian Recall					No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	16	75	55	55
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.13	0.63	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.16	0.32	0.29	0.12	0.22	0.48	0.48
s, saturation flow rate [veh/h]	1810	1900	1418	1559	1810	3618	1800	900
c, Capacity [veh/h]	534	561	419	460	237	2272	826	413
d1, Uniform Delay [s]	35.14	35.30	42.25	42.10	51.20	10.58	32.44	32.44
k, delay calibration	0.04	0.04	0.50	0.43	0.09	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.29	70.24	36.81	9.18	0.42	41.19	54.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.52	0.53	1.09	0.99	0.89	0.34	1.04	1.04
d, Delay for Lane Group [s/veh]	35.43	35.59	112.4	78.91	60.38	10.99	73.63	86.54
Lane Group LOS	D	D	F	E	E	B	F	F
Critical Lane Group	No	No	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	6.53	7.06	20.00	17.54	6.80	4.88	16.28	17.76
50th-Percentile Queue Length [ft]	163.2	176.4	499.9	438.5	169.89	121.96	407.04	444.05
95th-Percentile Queue Length [veh]	10.72	11.41	28.81	24.41	11.07	8.50	23.50	25.33
95th-Percentile Queue Length [ft]	268.0	285.3	720.2	610.3	276.77	212.52	587.52	633.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	35.43	35.59	95.70	60.38	10.99	0.00	0.00	77.64	86.54
Movement LOS				D	D	F	E	B			F	F
d_A, Approach Delay [s/veh]	0.00			72.48			21.44			77.93		
Approach LOS	A			E			C			E		
d_I, Intersection Delay [s/veh]	60.87											
Intersection LOS	E											
Intersection V/C	0.913											

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 62: LINCOLN BOULEVARD/I-10 EB ON-RAMP**

Control Type:	Signalized	Delay (sec / veh):	108.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

**Intersection Setup**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌						⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ol-Ca			Olympic Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	180	270	220	0	0	0	0	764	510	550	1255	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	180	270	220	0	0	0	0	764	510	550	1255	0
Peak Hour Factor	0.8344	0.8344	0.8344	1.0000	1.0000	1.0000	1.0000	0.9406	0.9406	0.9379	0.9379	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	81	66	0	0	0	0	203	136	147	335	0
Total Analysis Volume [veh/h]	216	324	264	0	0	0	0	812	542	586	1338	0
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			17			3			0		
Bicycle Volume [bicycles/h]	4			0			3			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	2	2	2	0	0	0	0	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	7	7	7	0	0	0	0	7	7	7	7	0
Maximum Green [s]	30	30	30	0	0	0	0	30	30	20	30	0
Amber [s]	3.6	3.6	3.6	0.0	0.0	0.0	0.0	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0
Split [s]	30	30	30	0	0	0	0	45	45	45	90	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	5	5	5	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	25	25	25	0	0	0	0	12	12	0	8	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall		No						No		Yes	Yes	
Maximum Recall		No						No		No	No	
Pedestrian Recall		No						No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R		C	C	R	L	C
C, Cycle Length [s]	120	120	120		120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	22	22	22		70	70	70	14	89
g / C, Green / Cycle	0.18	0.18	0.18		0.59	0.59	0.59	0.11	0.74
(v / s)_j Volume / Saturation Flow Rate	0.15	0.15	0.17		0.19	0.22	0.68	0.24	0.37
s, saturation flow rate [veh/h]	1829	1729	1580		3618	1557	500	2400	3618
c, Capacity [veh/h]	337	319	291		2119	912	293	276	2673
d1, Uniform Delay [s]	47.07	47.06	47.93		12.67	13.16	24.86	53.10	6.49
k, delay calibration	0.09	0.09	0.15		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.46	4.65	13.27		0.03	0.09	101.59	518.02	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

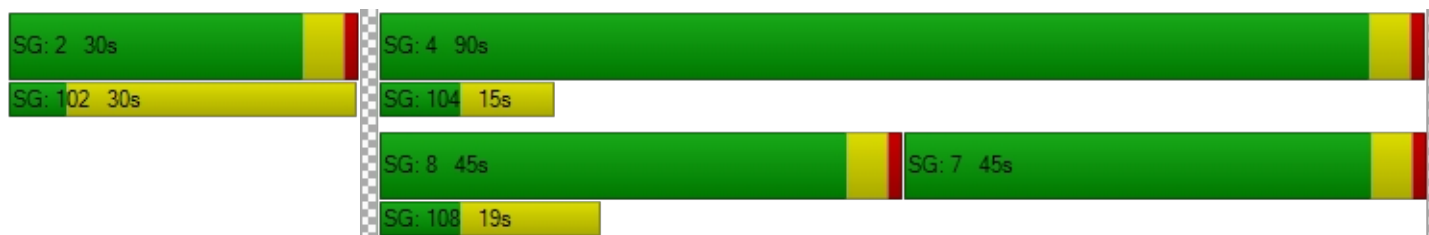
X, volume / capacity	0.82	0.82	0.91		0.32	0.37	1.16	2.12	0.50
d, Delay for Lane Group [s/veh]	51.53	51.71	61.19		12.70	13.25	126.44	571.12	7.16
Lane Group LOS	D	D	E		B	B	F	F	A
Critical Lane Group	No	No	Yes		No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	8.30	7.86	8.71		4.46	4.64	15.82	24.00	6.42
50th-Percentile Queue Length [ft]	207.56	196.40	217.63		111.45	116.11	395.41	599.91	160.61
95th-Percentile Queue Length [veh]	13.03	12.45	13.54		7.92	8.18	24.74	39.12	10.58
95th-Percentile Queue Length [ft]	325.70	311.31	338.60		198.02	204.47	618.44	978.07	264.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	51.53	51.67	61.19	0.00	0.00	0.00	0.00	12.70	83.95	571.12	7.16	0.00
Movement LOS	D	D	E					B	F	F	A	
d_A, Approach Delay [s/veh]	54.76			0.00			41.27			178.93		
Approach LOS	D			A			D			F		
d_I, Intersection Delay [s/veh]	108.81											
Intersection LOS	F											
Intersection V/C	1.088											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 65: LINCOLN BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	36.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			Li-Ca			Li-Ca		
Base Volume Input [veh/h]	100	410	130	60	350	80	130	1054	130	90	1095	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	410	130	60	350	80	130	1054	130	90	1095	80
Peak Hour Factor	0.9375	0.9375	0.9375	0.8729	0.8729	0.8729	0.8556	0.8556	0.8556	0.9305	0.9305	0.9305
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	109	35	17	100	23	38	308	38	24	294	21
Total Analysis Volume [veh/h]	107	437	139	69	401	92	152	1232	152	97	1177	86
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			23			8			21		
Bicycle Volume [bicycles/h]	2			11			12			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	3	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	3	6	0	3	6	0	3	6	0	3	6	0
Maximum Green [s]	15	29	0	10	19	0	15	35	0	15	60	0
Amber [s]	3.5	3.5	0.0	3.5	3.5	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	19	43	0	18	42	0	15	45	0	14	44	0
Vehicle Extension [s]	1.5	3.0	0.0	1.5	3.0	0.0	1.5	4.0	0.0	1.5	4.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	12	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.5	2.5	0.0	2.5	2.5	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.50	4.50	4.50	4.50	4.50	4.50	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.50	2.50	2.50	2.50	2.50	2.50	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	9	30	30	6	27	27	10	58	58	8	55	55
g / C, Green / Cycle	0.07	0.25	0.25	0.05	0.23	0.23	0.09	0.48	0.48	0.07	0.46	0.46
(v / s)_j Volume / Saturation Flow Rate	0.06	0.23	0.09	0.04	0.13	0.14	0.08	0.34	0.10	0.05	0.33	0.05
s, saturation flow rate [veh/h]	1810	1900	1578	1810	1900	1741	1810	3618	1564	1810	3618	1577
c, Capacity [veh/h]	133	478	397	89	432	396	157	1738	752	121	1667	727
d1, Uniform Delay [s]	54.79	43.67	36.87	56.41	41.32	41.54	54.65	24.56	17.94	55.20	25.86	18.45
k, delay calibration	0.04	0.16	0.11	0.04	0.11	0.11	0.11	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.34	10.27	0.53	5.29	1.26	1.49	26.28	2.47	0.61	4.49	2.54	0.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

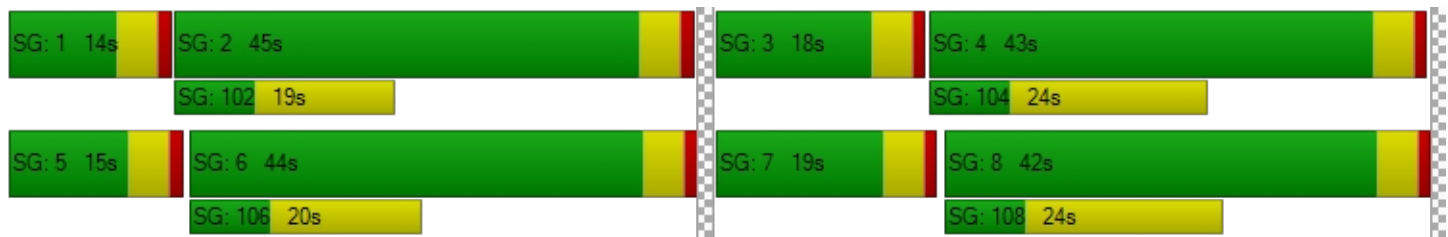
X, volume / capacity	0.81	0.91	0.35	0.77	0.59	0.61	0.97	0.71	0.20	0.80	0.71	0.12
d, Delay for Lane Group [s/veh]	59.13	53.94	37.40	61.70	42.59	43.03	80.93	27.03	18.55	59.69	28.40	18.79
Lane Group LOS	E	D	D	E	D	D	F	C	B	E	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	3.32	13.76	3.39	2.18	6.77	6.46	5.68	13.86	2.52	3.02	13.55	1.42
50th-Percentile Queue Length [ft]	83.01	344.06	84.71	54.55	169.16	161.58	142.07	346.48	62.92	75.52	338.71	35.46
95th-Percentile Queue Length [veh]	5.98	19.85	6.10	3.93	11.03	10.63	9.59	19.96	4.53	5.44	19.58	2.55
95th-Percentile Queue Length [ft]	149.41	496.15	152.47	98.18	275.82	265.82	239.80	499.11	113.26	135.94	489.62	63.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.13	53.94	37.40	61.70	42.75	43.03	80.93	27.03	18.55	59.69	28.40	18.79
Movement LOS	E	D	D	E	D	D	F	C	B	E	C	B
d_A, Approach Delay [s/veh]	51.39			45.12			31.53			30.03		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	36.16											
Intersection LOS	D											
Intersection V/C	0.677											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 71: ELEVENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			11th St			11th St		
Base Volume Input [veh/h]	40	709	20	144	574	80	100	380	23	80	340	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	709	20	144	574	80	100	380	23	80	340	20
Peak Hour Factor	0.9311	0.9311	0.9311	0.9267	0.9267	0.9267	0.9297	0.9297	0.9297	0.8263	0.8263	0.8263
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	190	5	39	155	22	27	102	6	24	103	6
Total Analysis Volume [veh/h]	43	761	21	155	619	86	108	409	25	97	411	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	26			14			49			11		
Bicycle Volume [bicycles/h]	5			9			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	40	40	40	40	40	40
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.06	0.21	0.21	0.22	0.19	0.19	0.11	0.22	0.02	0.10	0.23
s, saturation flow rate [veh/h]	754	1900	1877	699	1900	1809	965	1900	1571	989	1879
c, Capacity [veh/h]	384	1007	995	354	1007	958	225	675	558	246	667
d1, Uniform Delay [s]	15.78	11.14	11.15	19.90	10.91	10.92	33.30	21.20	16.90	31.49	21.65
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	1.14	1.16	3.90	0.99	1.05	0.59	0.33	0.01	0.38	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.11	0.39	0.39	0.44	0.36	0.36	0.48	0.61	0.04	0.39	0.65
d, Delay for Lane Group [s/veh]	16.37	12.28	12.31	23.79	11.90	11.98	33.89	21.53	16.92	31.87	22.05
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.55	4.06	4.03	2.56	3.63	3.50	1.98	5.91	0.29	1.71	6.43
50th-Percentile Queue Length [ft]	13.73	101.50	100.74	64.03	90.82	87.54	49.58	147.83	7.18	42.65	160.75
95th-Percentile Queue Length [veh]	0.99	7.31	7.25	4.61	6.54	6.30	3.57	9.90	0.52	3.07	10.59
95th-Percentile Queue Length [ft]	24.71	182.69	181.34	115.25	163.48	157.56	89.25	247.53	12.92	76.78	264.72

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.37	12.30	12.31	23.79	11.93	11.98	33.89	21.53	16.92	31.87	22.05	22.05
Movement LOS	B	B	B	C	B	B	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	12.51			14.07			23.78			23.84		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.40											
Intersection LOS	B											
Intersection V/C	0.453											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 77: ELEVENTH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			11th St			11th St		
Base Volume Input [veh/h]	90	580	40	50	610	50	20	259	50	110	513	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	580	40	50	610	50	20	259	50	110	513	140
Peak Hour Factor	0.9020	0.9020	0.9020	0.9325	0.9325	0.9325	0.8586	0.8586	0.8586	0.9274	0.9274	0.9274
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	161	11	13	164	13	6	75	15	30	138	38
Total Analysis Volume [veh/h]	100	643	44	54	654	54	23	302	58	119	553	151
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	10			30			1			24		
Bicycle Volume [bicycles/h]	15			4			4			3		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	50	50	50	50	50	50	31	31	31	31	31
g / C, Green / Cycle	0.56	0.56	0.56	0.56	0.56	0.56	0.34	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.13	0.18	0.18	0.07	0.19	0.19	0.03	0.20	0.12	0.29	0.10
s, saturation flow rate [veh/h]	751	1900	1849	767	1900	1841	869	1833	1035	1900	1579
c, Capacity [veh/h]	400	1057	1029	410	1057	1024	127	626	248	649	539
d1, Uniform Delay [s]	17.09	10.84	10.85	15.71	10.92	10.93	41.40	24.29	35.69	27.53	21.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.49	0.83	0.86	0.66	0.87	0.91	0.25	0.31	0.54	4.24	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.25	0.33	0.33	0.13	0.34	0.34	0.18	0.58	0.48	0.85	0.28
d, Delay for Lane Group [s/veh]	18.58	11.67	11.71	16.37	11.79	11.84	41.65	24.60	36.23	31.77	21.69
Lane Group LOS	B	B	B	B	B	B	D	C	D	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.46	3.62	3.56	0.72	3.77	3.69	0.49	6.05	2.44	11.20	2.25
50th-Percentile Queue Length [ft]	36.47	90.60	88.93	18.02	94.29	92.24	12.37	151.19	60.96	279.98	56.24
95th-Percentile Queue Length [veh]	2.63	6.52	6.40	1.30	6.79	6.64	0.89	10.08	4.39	16.69	4.05
95th-Percentile Queue Length [ft]	65.64	163.07	160.07	32.44	169.71	166.03	22.27	252.01	109.73	417.19	101.23

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.58	11.69	11.71	16.37	11.81	11.84	41.65	24.60	24.60	36.23	31.77	21.69
Movement LOS	B	B	B	B	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.56			12.14			25.62			30.56		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.64											
Intersection LOS	B											
Intersection V/C	0.481											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 80: FOURTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.500

**Intersection Setup**

Name	Montana Ave			Montana Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵			↵↵			⊕			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			14th St			14th St		
Base Volume Input [veh/h]	50	450	40	90	350	60	80	208	40	30	112	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	450	40	90	350	60	80	208	40	30	112	50
Peak Hour Factor	0.8943	0.8943	0.8943	0.9592	0.9592	0.9592	0.9583	0.9583	0.9583	0.9318	0.9318	0.9318
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	126	11	23	91	16	21	54	10	8	30	13
Total Analysis Volume [veh/h]	56	503	45	94	365	63	83	217	42	32	120	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	38			49			98			130		
Bicycle Volume [bicycles/h]	2			0			20			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	C	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	25	25	25	25	26	26	26
g / C, Green / Cycle	0.42	0.42	0.42	0.42	0.43	0.43	0.43
(v / s)_j Volume / Saturation Flow Rate	0.06	0.30	0.11	0.24	0.20	0.09	0.04
s, saturation flow rate [veh/h]	949	1845	872	1796	1684	1734	1505
c, Capacity [veh/h]	315	772	243	752	796	816	645
d1, Uniform Delay [s]	20.17	14.47	24.86	13.35	12.09	10.67	10.18
k, delay calibration	0.04	0.08	0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.10	0.95	0.38	0.25	1.69	0.50	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

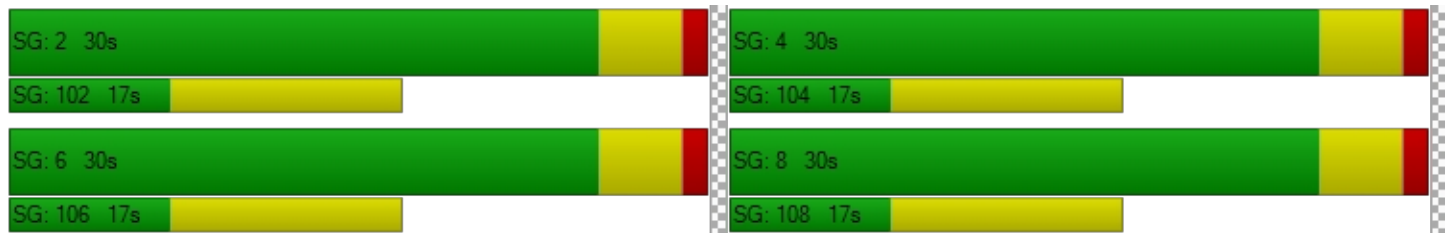
X, volume / capacity	0.18	0.71	0.39	0.57	0.43	0.19	0.08
d, Delay for Lane Group [s/veh]	20.27	15.42	25.23	13.61	13.78	11.18	10.44
Lane Group LOS	C	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.63	5.54	1.23	3.90	3.16	1.21	0.42
50th-Percentile Queue Length [ft]	15.68	138.38	30.84	97.39	79.09	30.27	10.43
95th-Percentile Queue Length [veh]	1.13	9.39	2.22	7.01	5.69	2.18	0.75
95th-Percentile Queue Length [ft]	28.23	234.84	55.52	175.30	142.37	54.48	18.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	20.27	15.42	15.42	25.23	13.61	13.61	13.78	13.78	13.78	11.18	11.18	10.44
Movement LOS	C	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	15.87			15.70			13.78			10.98		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	14.79											
Intersection LOS	B											
Intersection V/C	0.500											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 81: FOURTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.529

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	972	16	50	952	70	79	408	100	80	302	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	972	16	50	952	70	79	408	100	80	302	70
Peak Hour Factor	0.8789	0.8789	0.8789	0.9341	0.9341	0.9341	0.9304	0.9304	0.9304	0.8250	0.8250	0.8250
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	276	5	13	255	19	21	110	27	24	92	21
Total Analysis Volume [veh/h]	80	1106	18	54	1019	75	85	439	107	97	366	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	88			31			83			108		
Bicycle Volume [bicycles/h]	4			5			6			10		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	17	17	17	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	43	43	43	43	43	43	28	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.35	0.35	0.35	0.35	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.15	0.30	0.30	0.11	0.29	0.30	0.09	0.23	0.07	0.10	0.19	0.06
s, saturation flow rate [veh/h]	520	1900	1885	508	1900	1814	997	1900	1548	956	1900	1468
c, Capacity [veh/h]	254	1015	1007	250	1015	969	257	666	543	212	666	515
d1, Uniform Delay [s]	22.18	12.33	12.35	20.97	12.24	12.36	30.27	21.91	18.10	33.88	20.87	17.89
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.23	2.19	2.22	1.97	2.10	2.32	0.28	0.42	0.07	0.57	0.26	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.32	0.56	0.56	0.22	0.55	0.56	0.33	0.66	0.20	0.46	0.55	0.17
d, Delay for Lane Group [s/veh]	25.40	14.52	14.57	22.94	14.35	14.67	30.55	22.33	18.17	34.46	21.14	17.94
Lane Group LOS	C	B	B	C	B	B	C	C	B	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.37	6.44	6.41	0.87	6.26	6.22	1.47	6.65	1.33	1.84	5.37	1.07
50th-Percentile Queue Length [ft]	34.37	160.88	160.36	21.73	156.61	155.39	36.69	166.27	33.33	45.92	134.28	26.68
95th-Percentile Queue Length [veh]	2.47	10.60	10.57	1.56	10.37	10.30	2.64	10.88	2.40	3.31	9.17	1.92
95th-Percentile Queue Length [ft]	61.86	264.89	264.20	39.12	259.22	257.61	66.04	272.01	60.00	82.66	229.30	48.03

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.40	14.54	14.57	22.94	14.49	14.67	30.55	22.33	18.17	34.46	21.14	17.94
Movement LOS	C	B	B	C	B	B	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	15.27			14.90			22.73			23.00		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	17.68											
Intersection LOS	B											
Intersection V/C	0.529											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 82: FOURTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			14th St			14th St		
Base Volume Input [veh/h]	20	161	60	70	139	60	50	489	60	20	318	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	161	60	70	139	60	50	489	60	20	318	20
Peak Hour Factor	0.9063	0.9063	0.9063	0.7849	0.7849	0.7849	0.9441	0.9441	0.9441	0.9381	0.9381	0.9381
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	44	17	22	44	19	13	129	16	5	85	5
Total Analysis Volume [veh/h]	22	178	66	89	177	76	53	518	64	21	339	21
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	23			16			29			8		
Bicycle Volume [bicycles/h]	3			5			21			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	43	43	43	43	43	43
g / C, Green / Cycle	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.29	0.34	0.05	0.05	0.27	0.04	0.02	0.18	0.01
s, saturation flow rate [veh/h]	908	779	1579	1050	1900	1537	895	1900	1540
c, Capacity [veh/h]	358	325	537	539	1035	837	410	1035	839
d1, Uniform Delay [s]	21.56	23.59	18.29	13.79	11.40	8.65	16.90	10.09	8.41
k, delay calibration	0.33	0.43	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.89	17.55	0.12	0.36	1.73	0.18	0.24	0.84	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

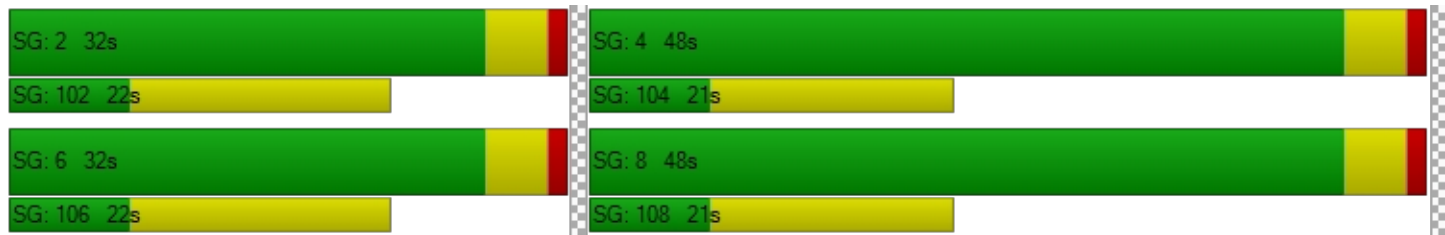
X, volume / capacity	0.74	0.82	0.14	0.10	0.50	0.08	0.05	0.33	0.03
d, Delay for Lane Group [s/veh]	30.45	41.14	18.41	14.15	13.13	8.83	17.14	10.94	8.46
Lane Group LOS	C	D	B	B	B	A	B	B	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	4.48	5.99	0.94	0.60	5.67	0.53	0.27	3.24	0.17
50th-Percentile Queue Length [ft]	112.02	149.74	23.45	15.11	141.65	13.15	6.81	80.94	4.18
95th-Percentile Queue Length [veh]	7.95	10.00	1.69	1.09	9.57	0.95	0.49	5.83	0.30
95th-Percentile Queue Length [ft]	198.81	250.09	42.21	27.20	239.25	23.67	12.26	145.70	7.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	30.45	30.45	30.45	41.14	41.14	18.41	14.15	13.13	8.83	17.14	10.94	8.46
Movement LOS	C	C	C	D	D	B	B	B	A	B	B	A
d_A, Approach Delay [s/veh]	30.45			36.09			12.78			11.14		
Approach LOS	C			D			B			B		
d_I, Intersection Delay [s/veh]	20.20											
Intersection LOS	C											
Intersection V/C	0.614											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 83: FOURTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			14th St			14th St		
Base Volume Input [veh/h]	50	692	100	120	587	129	30	420	70	98	290	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	692	100	120	587	129	30	420	70	98	290	30
Peak Hour Factor	0.9287	0.9287	0.9287	0.9538	0.9538	0.9538	0.9459	0.9459	0.9459	0.9561	0.9561	0.9561
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	186	27	31	154	34	8	111	19	26	76	8
Total Analysis Volume [veh/h]	54	745	108	126	615	135	32	444	74	102	303	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			26			30			36		
Bicycle Volume [bicycles/h]	4			3			6			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	68.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	42	42	42	42	42	42	28	28	28	28	28	28
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_j Volume / Saturation Flow Rate	0.07	0.23	0.23	0.19	0.20	0.21	0.03	0.23	0.05	0.11	0.16	0.02
s, saturation flow rate [veh/h]	721	1900	1801	656	1900	1758	1081	1900	1555	955	1900	1550
c, Capacity [veh/h]	367	1004	952	329	1004	929	312	677	554	215	677	552
d1, Uniform Delay [s]	16.39	11.53	11.57	19.95	11.16	11.20	26.00	21.62	17.39	33.80	19.71	16.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.11	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.84	1.37	1.47	3.34	1.12	1.24	0.05	1.08	0.04	0.60	0.17	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.15	0.43	0.44	0.38	0.39	0.39	0.10	0.66	0.13	0.47	0.45	0.06
d, Delay for Lane Group [s/veh]	17.23	12.90	13.03	23.30	12.28	12.44	26.05	22.70	17.43	34.40	19.88	16.92
Lane Group LOS	B	B	B	C	B	B	C	C	B	C	B	B
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.72	4.67	4.50	2.05	3.99	3.79	0.49	6.83	0.89	1.91	4.15	0.36
50th-Percentile Queue Length [ft]	17.89	116.72	112.50	51.36	99.80	94.70	12.30	170.64	22.36	47.82	103.81	9.10
95th-Percentile Queue Length [veh]	1.29	8.21	7.98	3.70	7.19	6.82	0.89	11.11	1.61	3.44	7.47	0.66
95th-Percentile Queue Length [ft]	32.20	205.31	199.47	92.44	179.63	170.46	22.13	277.75	40.24	86.07	186.87	16.38

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.23	12.96	13.03	23.30	12.34	12.44	26.05	22.70	17.43	34.40	19.88	16.92
Movement LOS	B	B	B	C	B	B	C	C	B	C	B	B
d_A, Approach Delay [s/veh]	13.22			13.93			22.18			23.07		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.78											
Intersection LOS	B											
Intersection V/C	0.465											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 84: FOURTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	15.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

**Intersection Setup**

Name	Broadway			Broadway			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			14th St			14th St		
Base Volume Input [veh/h]	50	386	50	128	349	70	10	410	62	80	340	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	386	50	128	349	70	10	410	62	80	340	60
Peak Hour Factor	0.9653	0.9653	0.9653	0.9146	0.9146	0.9146	0.9102	0.9102	0.9102	0.9003	0.9003	0.9003
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	100	13	35	95	19	3	113	17	22	94	17
Total Analysis Volume [veh/h]	52	400	52	140	382	77	11	450	68	89	378	67
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			13			33		
Bicycle Volume [bicycles/h]	30			39			5			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	9.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	25	25	25	25	25	25
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.51	0.36	0.36	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.05	0.21	0.03	0.14	0.20	0.05	0.01	0.24	0.04	0.09	0.20	0.04
s, saturation flow rate [veh/h]	1010	1900	1562	998	1900	1538	1013	1900	1527	947	1900	1558
c, Capacity [veh/h]	469	962	791	457	962	778	272	689	553	223	689	565
d1, Uniform Delay [s]	15.02	10.81	8.83	16.95	10.69	8.99	24.57	18.64	14.89	29.47	17.76	14.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	1.33	0.16	1.73	1.23	0.25	0.02	0.42	0.04	0.43	0.25	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

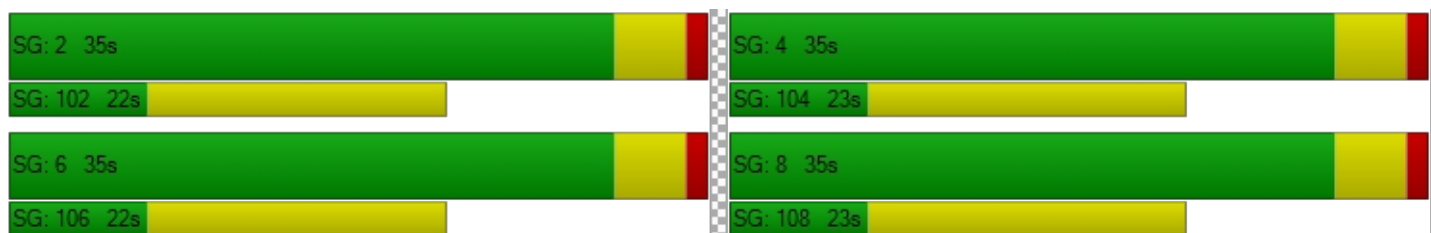
X, volume / capacity	0.11	0.42	0.07	0.31	0.40	0.10	0.04	0.65	0.12	0.40	0.55	0.12
d, Delay for Lane Group [s/veh]	15.50	12.14	8.99	18.68	11.91	9.24	24.59	19.05	14.92	29.90	18.01	14.90
Lane Group LOS	B	B	A	B	B	A	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	0.57	3.64	0.38	1.75	3.43	0.58	0.15	5.70	0.68	1.41	4.54	0.67
50th-Percentile Queue Length [ft]	14.28	90.93	9.59	43.85	85.65	14.50	3.75	142.41	17.09	35.33	113.59	16.81
95th-Percentile Queue Length [veh]	1.03	6.55	0.69	3.16	6.17	1.04	0.27	9.61	1.23	2.54	8.04	1.21
95th-Percentile Queue Length [ft]	25.70	163.67	17.27	78.93	154.17	26.10	6.75	240.26	30.76	63.59	200.99	30.25

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.50	12.14	8.99	18.68	11.91	9.24	24.59	19.05	14.92	29.90	18.01	14.90
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.16			13.15			18.64			19.60		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.85											
Intersection LOS	B											
Intersection V/C	0.447											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 86: FOURTEENTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			14th St			14th St		
Base Volume Input [veh/h]	70	400	60	160	740	70	20	322	160	110	468	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	400	60	160	740	70	20	322	160	110	468	10
Peak Hour Factor	0.9401	0.9401	0.9401	0.9481	0.9481	0.9481	0.8320	0.8320	0.8320	0.9197	0.9197	0.9197
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	106	16	42	195	18	6	97	48	30	127	3
Total Analysis Volume [veh/h]	74	425	64	169	781	74	24	387	192	120	509	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			47			15			15		
Bicycle Volume [bicycles/h]	7			22			25			20		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	44.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	4.0	0.0	0.0	4.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	28	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	5.00	5.00	5.00	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	3.00	3.00	3.00	3.00	3.00	3.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	33	33	33	33	27	27	27	27	27	27
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.47	0.47	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.11	0.13	0.13	0.18	0.23	0.23	0.03	0.20	0.13	0.12	0.27	0.01
s, saturation flow rate [veh/h]	655	1900	1801	918	1900	1831	900	1900	1516	996	1900	1554
c, Capacity [veh/h]	297	902	855	444	902	869	218	738	589	298	738	604
d1, Uniform Delay [s]	19.53	11.12	11.15	16.96	12.53	12.55	27.34	16.44	14.99	25.70	17.89	13.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.00	0.76	0.82	2.47	1.84	1.93	0.08	0.22	0.12	0.32	0.43	0.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

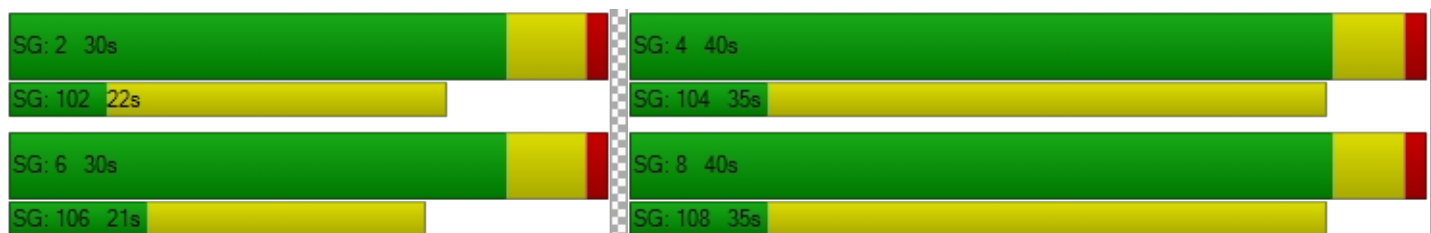
X, volume / capacity	0.25	0.28	0.28	0.38	0.48	0.48	0.11	0.52	0.33	0.40	0.69	0.02
d, Delay for Lane Group [s/veh]	21.53	11.88	11.97	19.43	14.36	14.48	27.43	16.66	15.11	26.03	18.32	13.19
Lane Group LOS	C	B	B	B	B	B	C	B	B	C	B	B
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.18	2.68	2.60	2.10	4.20	4.10	0.35	4.42	2.00	1.77	6.35	0.10
50th-Percentile Queue Length [ft]	29.44	66.95	64.88	52.46	105.05	102.56	8.80	110.57	50.00	44.14	158.83	2.51
95th-Percentile Queue Length [veh]	2.12	4.82	4.67	3.78	7.56	7.38	0.63	7.87	3.60	3.18	10.49	0.18
95th-Percentile Queue Length [ft]	52.99	120.51	116.78	94.42	189.09	184.61	15.84	196.80	90.00	79.45	262.17	4.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	21.53	11.92	11.97	19.43	14.42	14.48	27.43	16.66	15.11	26.03	18.32	13.19
Movement LOS	C	B	B	B	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.19			15.25			16.59			19.68		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.13											
Intersection LOS	B											
Intersection V/C	0.498											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 92: SEVENTEENTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.469

**Intersection Setup**

Name	Montana Ave			Montana Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			17th St			17th St		
Base Volume Input [veh/h]	40	390	50	60	500	56	90	61	80	50	79	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	390	50	60	500	56	90	61	80	50	79	20
Peak Hour Factor	0.9559	0.9559	0.9559	0.9341	0.9341	0.9341	0.7813	0.7813	0.7813	0.8611	0.8611	0.8611
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	102	13	16	134	15	29	20	26	15	23	6
Total Analysis Volume [veh/h]	42	408	52	64	535	60	115	78	102	58	92	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	66			29			58			70		
Bicycle Volume [bicycles/h]	1			0			4			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	31	31	31	31	31	31	31
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	14	14	14	14	14	9	9
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.05	0.25	0.07	0.28	0.04	0.19	0.11
s, saturation flow rate [veh/h]	861	1840	923	1900	1485	1571	1646
c, Capacity [veh/h]	362	802	403	828	648	587	601
d1, Uniform Delay [s]	11.84	6.69	11.14	6.98	5.23	10.09	9.23
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.24	0.07	0.32	0.02	0.25	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

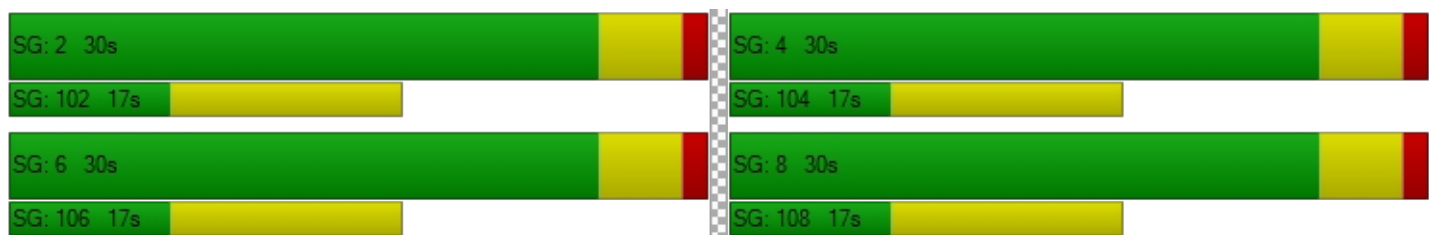
X, volume / capacity	0.12	0.57	0.16	0.65	0.09	0.50	0.29
d, Delay for Lane Group [s/veh]	11.89	6.93	11.21	7.30	5.25	10.34	9.33
Lane Group LOS	B	A	B	A	A	B	A
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.20	1.30	0.30	1.59	0.13	1.20	0.64
50th-Percentile Queue Length [ft]	5.09	32.51	7.40	39.67	3.28	29.91	15.93
95th-Percentile Queue Length [veh]	0.37	2.34	0.53	2.86	0.24	2.15	1.15
95th-Percentile Queue Length [ft]	9.17	58.52	13.32	71.40	5.90	53.84	28.68

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	11.89	6.93	6.93	11.21	7.30	5.25	10.34	10.34	10.34	9.33	9.33	9.33
Movement LOS	B	A	A	B	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	7.35			7.49			10.34			9.33		
Approach LOS	A			A			B			A		
d_I, Intersection Delay [s/veh]	8.16											
Intersection LOS	A											
Intersection V/C	0.469											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 93: SEVENTEENTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			25.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			17th St			17th St		
Base Volume Input [veh/h]	70	1112	60	90	1132	20	90	281	70	50	159	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	1112	60	90	1132	20	90	281	70	50	159	30
Peak Hour Factor	0.9277	0.9277	0.9277	0.9245	0.9245	0.9245	0.9628	0.9628	0.9628	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	300	16	24	306	5	23	73	18	13	42	8
Total Analysis Volume [veh/h]	75	1199	65	97	1224	22	93	292	73	52	166	31
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			17			48			59		
Bicycle Volume [bicycles/h]	4			1			8			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	43.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	48	48	48	48	48	48	23	23	23	23
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.60	0.29	0.29	0.29	0.29
(v / s)_j Volume / Saturation Flow Rate	0.17	0.34	0.34	0.22	0.33	0.33	0.08	0.20	0.05	0.11
s, saturation flow rate [veh/h]	453	1900	1857	445	1900	1882	1192	1820	1026	1839
c, Capacity [veh/h]	257	1131	1106	251	1131	1121	306	527	181	533
d1, Uniform Delay [s]	19.14	9.86	9.89	20.87	9.76	9.78	29.09	25.24	35.00	22.60
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.87	2.03	2.11	4.45	1.94	1.98	0.21	0.61	0.32	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

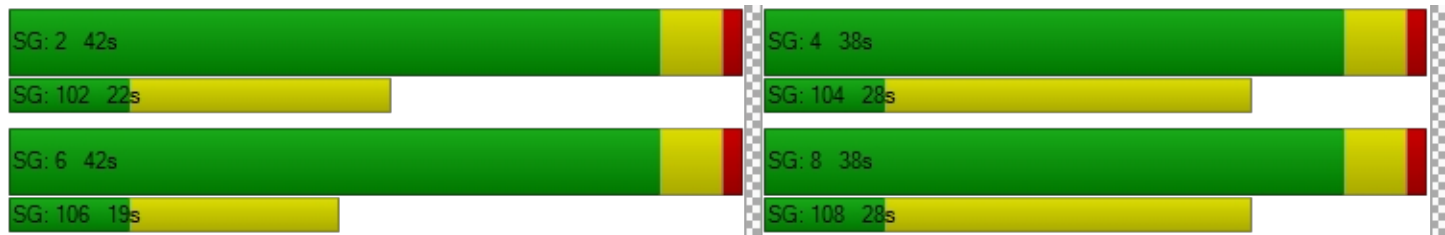
X, volume / capacity	0.29	0.56	0.57	0.39	0.55	0.55	0.30	0.69	0.29	0.37
d, Delay for Lane Group [s/veh]	22.00	11.89	12.00	25.32	11.71	11.76	29.29	25.85	35.32	22.76
Lane Group LOS	C	B	B	C	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.19	6.26	6.21	1.74	6.50	6.48	1.54	5.88	0.96	2.82
50th-Percentile Queue Length [ft]	29.64	156.58	155.17	43.49	162.40	162.04	38.51	147.03	23.89	70.56
95th-Percentile Queue Length [veh]	2.13	10.37	10.29	3.13	10.68	10.66	2.77	9.86	1.72	5.08
95th-Percentile Queue Length [ft]	53.36	259.19	257.31	78.28	266.90	266.42	69.32	246.46	43.01	127.01

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.00	11.94	12.00	25.32	11.73	11.76	29.29	25.85	25.85	35.32	22.76	22.76
Movement LOS	C	B	B	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.51			12.72			26.55			25.38		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.43											
Intersection LOS	B											
Intersection V/C	0.538											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 94: SEVENTEENTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+r			+r			+r		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			17th St			17th St		
Base Volume Input [veh/h]	20	251	100	30	179	70	60	311	50	10	229	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	251	100	30	179	70	60	311	50	10	229	10
Peak Hour Factor	0.7945	0.7945	0.7945	0.8109	0.8109	0.8109	0.9296	0.9296	0.9296	0.8696	0.8696	0.8696
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	79	31	9	55	22	16	84	13	3	66	3
Total Analysis Volume [veh/h]	25	316	126	37	221	86	65	335	54	12	263	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12			21			16			24		
Bicycle Volume [bicycles/h]	2			5			17			9		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	11.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	32	32	32	32	32	32	48	48	48	48	48	48
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	14	14	14	14	14	14
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	R	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	23	23	23	47	47	47	47
g / C, Green / Cycle	0.29	0.29	0.29	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.27	0.18	0.06	0.23	0.04	0.15	0.01
s, saturation flow rate [veh/h]	1734	1423	1551	1744	1538	1875	1558
c, Capacity [veh/h]	554	468	453	1086	911	1158	923
d1, Uniform Delay [s]	27.24	23.11	21.14	8.40	6.87	7.75	6.68
k, delay calibration	0.28	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.59	1.02	0.20	0.96	0.12	0.48	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

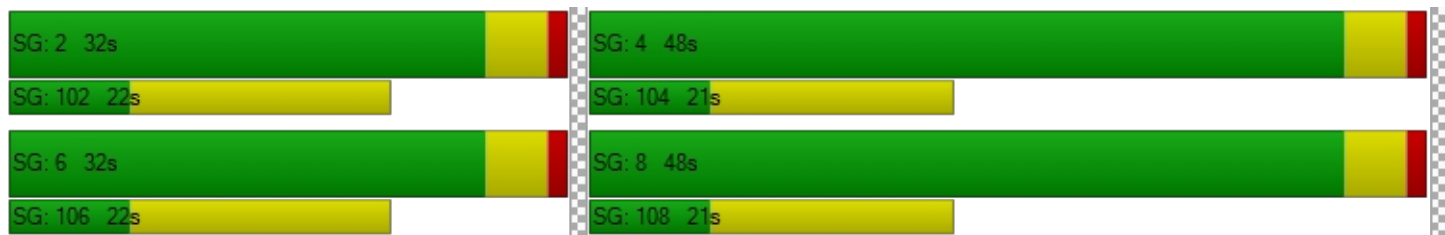
X, volume / capacity	0.84	0.55	0.19	0.37	0.06	0.24	0.01
d, Delay for Lane Group [s/veh]	35.83	24.12	21.34	9.36	6.99	8.23	6.71
Lane Group LOS	D	C	C	A	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	9.37	3.89	1.17	3.30	0.36	2.06	0.08
50th-Percentile Queue Length [ft]	234.37	97.26	29.29	82.42	9.09	51.58	1.96
95th-Percentile Queue Length [veh]	14.40	7.00	2.11	5.93	0.65	3.71	0.14
95th-Percentile Queue Length [ft]	359.90	175.07	52.72	148.36	16.36	92.85	3.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.83	35.83	35.83	24.12	24.12	21.34	9.36	9.36	6.99	8.23	8.23	6.71
Movement LOS	D	D	D	C	C	C	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	35.83			23.43			9.08			8.17		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	20.14											
Intersection LOS	C											
Intersection V/C	0.499											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 95: SEVENTEENTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			17th St			17th St		
Base Volume Input [veh/h]	40	930	90	50	865	61	20	310	56	89	270	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	930	90	50	865	61	20	310	56	89	270	50
Peak Hour Factor	0.9628	0.9628	0.9628	0.9424	0.9424	0.9424	0.9060	0.9060	0.9060	0.9228	0.9228	0.9228
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	241	23	13	229	16	6	86	15	24	73	14
Total Analysis Volume [veh/h]	42	966	93	53	918	65	22	342	62	96	293	54
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			11			40			21		
Bicycle Volume [bicycles/h]	13			9			10			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	42.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	46	46	46	46	46	46	34	34	34	34	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	44	44	44	44	44	44	27	27	27	27
g / C, Green / Cycle	0.55	0.55	0.55	0.55	0.55	0.55	0.34	0.34	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.07	0.28	0.29	0.10	0.26	0.26	0.02	0.22	0.10	0.19
s, saturation flow rate [veh/h]	581	1900	1827	540	1900	1848	1039	1841	994	1835
c, Capacity [veh/h]	304	1038	998	278	1038	1010	248	623	209	621
d1, Uniform Delay [s]	17.24	11.47	11.51	18.81	11.14	11.16	29.37	22.41	34.28	21.57
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.08	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.95	1.85	1.95	1.51	1.58	1.64	0.06	0.80	0.58	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.14	0.52	0.52	0.19	0.48	0.48	0.09	0.65	0.46	0.56
d, Delay for Lane Group [s/veh]	18.19	13.32	13.47	20.32	12.73	12.80	29.43	23.21	34.86	21.86
Lane Group LOS	B	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.59	5.94	5.80	0.80	5.31	5.21	0.36	6.13	1.78	5.00
50th-Percentile Queue Length [ft]	14.66	148.41	145.05	19.97	132.78	130.27	8.93	153.16	44.49	125.03
95th-Percentile Queue Length [veh]	1.06	9.93	9.75	1.44	9.09	8.95	0.64	10.19	3.20	8.67
95th-Percentile Queue Length [ft]	26.38	248.31	243.80	35.95	227.27	223.86	16.07	254.64	80.07	216.71

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.19	13.38	13.47	20.32	12.76	12.80	29.43	23.21	23.21	34.86	21.86	21.86
Movement LOS	B	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.57			13.15			23.53			24.68		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.48											
Intersection LOS	B											
Intersection V/C	0.505											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 96: SEVENTEENTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

**Intersection Setup**

Name	Broadway			Broadway			17th St			17th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			17th St			17th St		
Base Volume Input [veh/h]	36	492	60	50	478	20	20	330	30	120	250	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	492	60	50	478	20	20	330	30	120	250	60
Peak Hour Factor	0.9872	0.9872	0.9872	0.9250	0.9250	0.9250	0.8648	0.8648	0.8648	0.9070	0.9070	0.9070
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	125	15	14	129	5	6	95	9	33	69	17
Total Analysis Volume [veh/h]	36	498	61	54	517	22	23	382	35	132	276	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			17			39			23		
Bicycle Volume [bicycles/h]	10			8			24			36		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	L	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.26	0.04	0.06	0.27	0.01	0.02	0.22	0.14	0.19
s, saturation flow rate [veh/h]	896	1900	1551	910	1900	1568	1032	1860	978	1790
c, Capacity [veh/h]	351	944	771	363	944	779	307	691	264	666
d1, Uniform Delay [s]	19.07	12.01	9.23	18.95	12.18	8.99	23.05	17.80	28.24	17.07
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.59	2.11	0.20	0.86	2.28	0.07	0.04	0.32	0.55	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

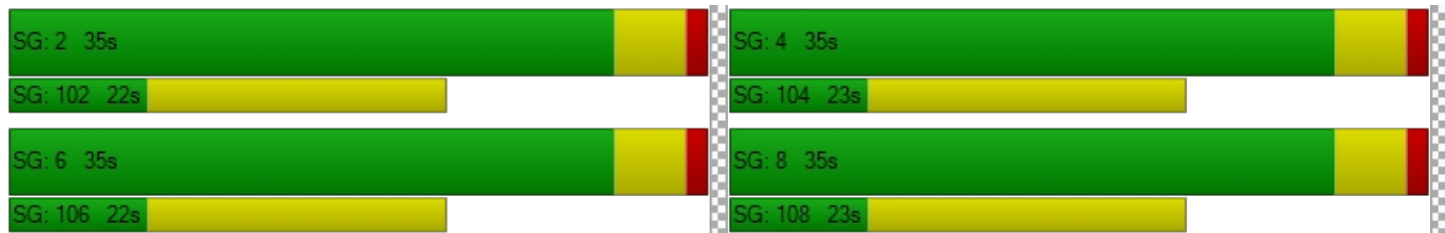
X, volume / capacity	0.10	0.53	0.08	0.15	0.55	0.03	0.07	0.60	0.50	0.51
d, Delay for Lane Group [s/veh]	19.65	14.12	9.43	19.82	14.46	9.06	23.09	18.12	28.79	17.30
Lane Group LOS	B	B	A	B	B	A	C	B	C	B
Critical Lane Group	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.47	5.06	0.47	0.70	5.34	0.16	0.30	4.96	2.04	3.89
50th-Percentile Queue Length [ft]	11.69	126.39	11.66	17.62	133.44	4.08	7.43	123.91	51.12	97.32
95th-Percentile Queue Length [veh]	0.84	8.74	0.84	1.27	9.13	0.29	0.53	8.61	3.68	7.01
95th-Percentile Queue Length [ft]	21.04	218.58	21.00	31.72	228.16	7.35	13.37	215.18	92.02	175.17

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.65	14.12	9.43	19.82	14.46	9.06	23.09	18.12	18.12	28.79	17.30	17.30
Movement LOS	B	B	A	B	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	13.98			14.75			18.38			20.50		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	16.59											
Intersection LOS	B											
Intersection V/C	0.496											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 102: TWENTIETH STREET \ (EAST) / MONTANA AVENUE \ (171)**

Control Type:	Signalized	Delay (sec / veh):	7.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.439

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	535	135	60	507	193	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	535	135	60	507	193	120
Peak Hour Factor	0.9006	0.9006	0.9569	0.9569	0.8421	0.8421
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	149	37	16	132	57	36
Total Analysis Volume [veh/h]	594	150	63	530	229	143
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		3		39	
Bicycle Volume [bicycles/h]	0		2		9	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	30	30	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	10	0	0	10	10	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			No	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C	L	R
C, Cycle Length [s]	29	29	29	29	29	29
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	13	13	13	13	7	7
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.31	0.10	0.08	0.28	0.13	0.09
s, saturation flow rate [veh/h]	1900	1545	826	1900	1810	1549
c, Capacity [veh/h]	859	699	376	859	420	360
d1, Uniform Delay [s]	6.36	4.84	11.23	6.07	9.84	9.47
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.06	0.08	0.27	0.41	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

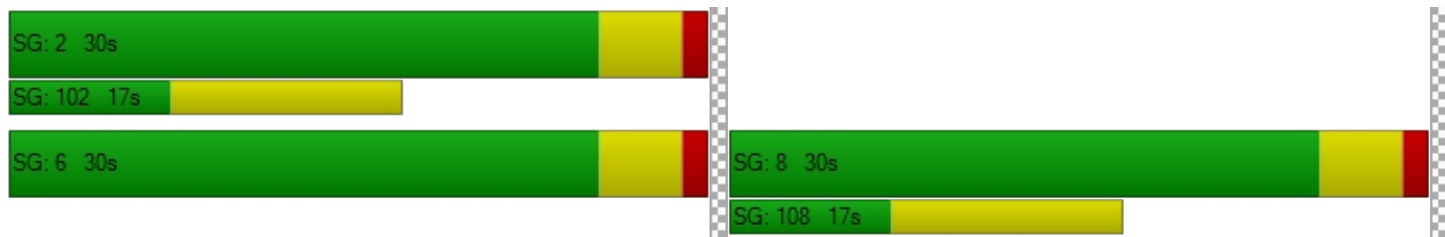
X, volume / capacity	0.69	0.21	0.17	0.62	0.54	0.40
d, Delay for Lane Group [s/veh]	6.74	4.90	11.30	6.34	10.25	9.73
Lane Group LOS	A	A	B	A	B	A
Critical Lane Group	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.42	0.27	0.28	1.19	0.98	0.59
50th-Percentile Queue Length [ft]	35.43	6.65	6.90	29.84	24.54	14.68
95th-Percentile Queue Length [veh]	2.55	0.48	0.50	2.15	1.77	1.06
95th-Percentile Queue Length [ft]	63.77	11.98	12.42	53.71	44.17	26.43

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	6.74	4.90	11.30	6.34	10.25	9.73
Movement LOS	A	A	B	A	B	A
d_A, Approach Delay [s/veh]	6.37		6.86		10.05	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	7.34					
Intersection LOS	A					
Intersection V/C	0.439					

**Sequence**

Ring 1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 103: TWENTIETH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.587

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			35.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	1150	52	74	1100	60	122	375	141	80	304	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1150	52	74	1100	60	122	375	141	80	304	40
Peak Hour Factor	0.9355	0.9355	0.9355	0.9069	0.9069	0.9069	0.9226	0.9226	0.9226	0.7618	0.7618	0.7618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	307	14	20	303	17	33	102	38	26	100	13
Total Analysis Volume [veh/h]	32	1229	56	82	1213	66	132	406	153	105	399	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			33			77			43		
Bicycle Volume [bicycles/h]	1			3			6			3		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	42	42	42	42	42	42	38	38	38	38	38	38
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	39	32	32	32	32	32
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.40	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.07	0.34	0.04	0.18	0.34	0.34	0.14	0.21	0.10	0.11	0.24
s, saturation flow rate [veh/h]	439	3618	1520	461	1900	1850	946	1900	1551	986	1851
c, Capacity [veh/h]	182	1771	744	188	930	906	247	751	613	284	732
d1, Uniform Delay [s]	26.92	15.76	10.80	30.09	15.75	15.84	32.34	18.59	16.21	28.85	19.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.09	2.27	0.20	7.17	4.23	4.50	1.80	0.61	0.21	0.80	1.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

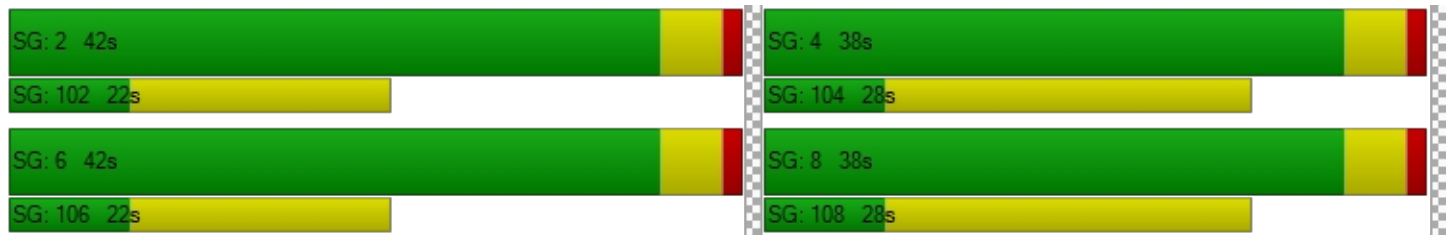
X, volume / capacity	0.18	0.69	0.08	0.44	0.69	0.70	0.54	0.54	0.25	0.37	0.62
d, Delay for Lane Group [s/veh]	29.02	18.03	11.00	37.26	19.98	20.34	34.14	19.19	16.43	29.65	20.45
Lane Group LOS	C	B	B	D	B	C	C	B	B	C	C
Critical Lane Group	No	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.62	8.65	0.55	1.81	9.13	9.09	2.52	5.56	1.82	1.84	6.66
50th-Percentile Queue Length [ft]	15.51	216.20	13.65	45.23	228.22	227.27	63.03	139.10	45.59	46.12	166.47
95th-Percentile Queue Length [veh]	1.12	13.47	0.98	3.26	14.08	14.04	4.54	9.43	3.28	3.32	10.89
95th-Percentile Queue Length [ft]	27.93	336.77	24.57	81.42	352.10	350.89	113.45	235.81	82.05	83.01	272.28

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.02	18.03	11.00	37.26	20.15	20.34	34.14	19.19	16.43	29.65	20.45	20.45
Movement LOS	C	B	B	D	C	C	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	17.99			21.19			21.44			22.18		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.30											
Intersection LOS	C											
Intersection V/C	0.587											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 104: TWENTIETH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵			↵↵			↵↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			20th St			20th St		
Base Volume Input [veh/h]	20	270	71	165	218	58	62	600	156	24	434	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	270	71	165	218	58	62	600	156	24	434	30
Peak Hour Factor	0.8240	0.8240	0.8240	0.8136	0.8136	0.8136	0.9537	0.9537	0.9537	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	82	22	51	67	18	16	157	41	7	118	8
Total Analysis Volume [veh/h]	24	328	86	203	268	71	65	629	164	26	472	33
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	36			25			40			19		
Bicycle Volume [bicycles/h]	1			5			17			13		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	61.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	50	50	50	50	50	50	30	30	30	30	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	18	18	18	18	18	18	18	18	18	18	18	18
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	L	C	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	39	39	39	39	39	31	31	31	31	31
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.02	0.23	0.34	0.45	0.12	0.07	0.22	0.22	0.04	0.27
s, saturation flow rate [veh/h]	1129	1817	600	600	600	901	1900	1709	691	1867
c, Capacity [veh/h]	151	896	279	296	296	220	744	669	224	731
d1, Uniform Delay [s]	36.55	13.30	15.53	18.57	11.65	31.56	18.88	19.06	26.97	20.29
k, delay calibration	0.11	0.11	0.16	0.30	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.48	0.37	5.19	22.77	0.41	3.39	2.93	3.51	1.05	5.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

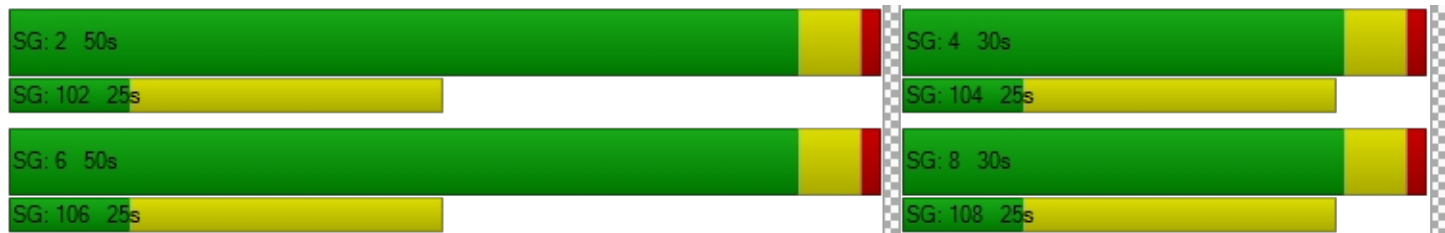
X, volume / capacity	0.16	0.46	0.73	0.91	0.24	0.30	0.55	0.57	0.12	0.69
d, Delay for Lane Group [s/veh]	37.03	13.68	20.72	41.33	12.07	34.95	21.81	22.57	28.02	25.58
Lane Group LOS	D	B	C	D	B	C	C	C	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.46	4.47	2.90	5.82	0.69	1.34	6.18	5.89	0.47	8.43
50th-Percentile Queue Length [ft]	11.49	111.63	72.62	145.53	17.27	33.42	154.42	147.16	11.77	210.82
95th-Percentile Queue Length [veh]	0.83	7.93	5.23	9.78	1.24	2.41	10.25	9.87	0.85	13.20
95th-Percentile Queue Length [ft]	20.68	198.27	130.72	244.46	31.08	60.16	256.31	246.63	21.19	329.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	37.03	13.68	13.68	20.72	41.33	12.07	34.95	22.08	22.57	28.02	25.58	25.58
Movement LOS	D	B	B	C	D	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.96			29.78			23.15			25.70		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	23.72											
Intersection LOS	C											
Intersection V/C	0.717											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 105: TWENTIETH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.614

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			20th St			20th St		
Base Volume Input [veh/h]	110	720	255	283	995	46	20	440	142	102	360	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	720	255	283	995	46	20	440	142	102	360	10
Peak Hour Factor	0.9132	0.9132	0.9132	0.9703	0.9703	0.9703	0.9458	0.9458	0.9458	0.8297	0.8297	0.8297
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	197	70	73	256	12	5	116	38	31	108	3
Total Analysis Volume [veh/h]	120	788	279	292	1026	47	21	465	150	123	434	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	67			51			54			49		
Bicycle Volume [bicycles/h]	3			3			11			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	48	0	14	49	0	23	45	0	14	35	0
Vehicle Extension [s]	2.0	22.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	7	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	73	59	59	73	62	62	38	25	25	38	31	31
g / C, Green / Cycle	0.61	0.49	0.49	0.61	0.52	0.52	0.32	0.21	0.21	0.32	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.17	0.29	0.30	0.39	0.28	0.29	0.02	0.17	0.18	0.11	0.12	0.12
s, saturation flow rate [veh/h]	692	1900	1685	748	1900	1863	942	1900	1651	1094	1900	1870
c, Capacity [veh/h]	403	932	826	423	980	961	350	402	350	296	486	478
d1, Uniform Delay [s]	13.02	22.03	22.33	17.76	19.64	19.69	29.15	44.77	45.39	32.16	37.65	37.69
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.88	2.83	3.44	8.94	2.23	2.31	0.03	1.36	2.20	0.35	0.25	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

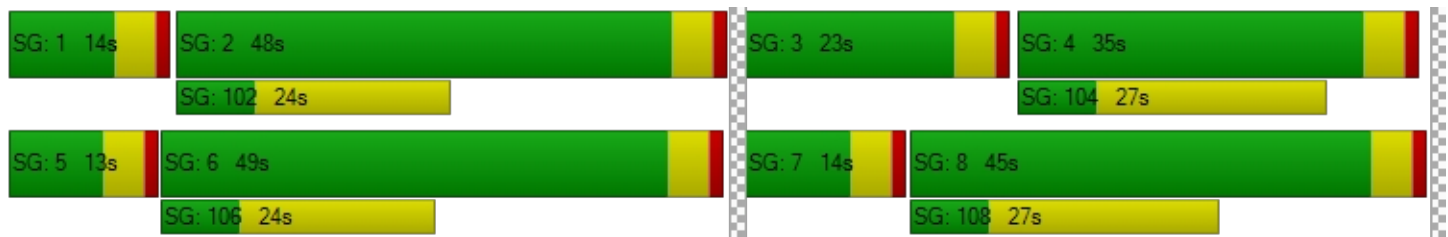
X, volume / capacity	0.30	0.60	0.62	0.69	0.55	0.55	0.06	0.79	0.85	0.42	0.46	0.46
d, Delay for Lane Group [s/veh]	14.90	24.85	25.77	26.70	21.87	22.00	29.18	46.13	47.59	32.51	37.91	37.95
Lane Group LOS	B	C	C	C	C	C	C	D	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.52	11.83	11.10	4.60	10.59	10.50	0.43	9.12	8.64	2.66	5.59	5.56
50th-Percentile Queue Length [ft]	38.02	295.80	277.39	114.99	264.86	262.56	10.64	227.97	216.00	66.41	139.82	138.89
95th-Percentile Queue Length [veh]	2.74	17.47	16.56	8.12	15.93	15.82	0.77	14.07	13.46	4.78	9.47	9.42
95th-Percentile Queue Length [ft]	68.44	436.83	413.96	202.92	398.32	395.42	19.15	351.78	336.51	119.54	236.78	235.53

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	14.90	25.12	25.77	26.70	21.93	22.00	29.18	46.59	47.59	32.51	37.93	37.95
Movement LOS	B	C	C	C	C	C	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	24.24			22.96			46.25			36.76		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.40											
Intersection LOS	C											
Intersection V/C	0.614											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 106: TWENTIETH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

**Intersection Setup**

Name	Broadway			Broadway			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			20th St			20th St		
Base Volume Input [veh/h]	20	352	170	264	448	57	80	504	120	41	639	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	352	170	264	448	57	80	504	120	41	639	50
Peak Hour Factor	0.9029	0.9029	0.9029	0.9182	0.9182	0.9182	0.9852	0.9852	0.9852	0.7996	0.7996	0.7996
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	97	47	72	122	16	20	128	30	13	200	16
Total Analysis Volume [veh/h]	22	390	188	288	488	62	81	512	122	51	799	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			30			26			12		
Bicycle Volume [bicycles/h]	4			5			11			15		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	50.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	29	0	0	29	0	0	41	0	0	41	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	35	35	35	35	35	35	26	26	26	26	26	26
g / C, Green / Cycle	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.02	0.21	0.12	0.29	0.26	0.04	0.12	0.17	0.18	0.06	0.23	0.23
s, saturation flow rate [veh/h]	921	1900	1568	1005	1900	1581	648	1900	1742	800	1900	1831
c, Capacity [veh/h]	368	942	777	437	942	783	206	709	650	275	709	683
d1, Uniform Delay [s]	18.20	11.21	10.12	21.88	11.98	9.27	28.26	16.62	16.70	23.06	17.86	17.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.31	1.34	0.74	7.61	2.04	0.20	0.45	0.17	0.20	0.12	0.33	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

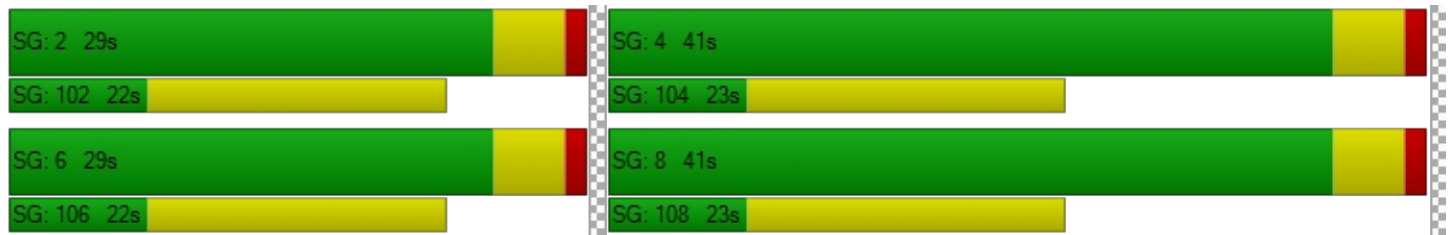
X, volume / capacity	0.06	0.41	0.24	0.66	0.52	0.08	0.39	0.46	0.47	0.19	0.62	0.62
d, Delay for Lane Group [s/veh]	18.51	12.55	10.86	29.49	14.02	9.47	28.71	16.80	16.90	23.18	18.19	18.27
Lane Group LOS	B	B	B	C	B	A	C	B	B	C	B	B
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.27	3.65	1.59	4.92	4.94	0.48	1.27	3.70	3.50	0.68	5.33	5.22
50th-Percentile Queue Length [ft]	6.86	91.16	39.83	122.90	123.53	11.90	31.76	92.61	87.46	17.08	133.26	130.40
95th-Percentile Queue Length [veh]	0.49	6.56	2.87	8.55	8.59	0.86	2.29	6.67	6.30	1.23	9.12	8.96
95th-Percentile Queue Length [ft]	12.34	164.08	71.70	213.81	214.67	21.43	57.16	166.70	157.43	30.74	227.91	224.04

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.51	12.55	10.86	29.49	14.02	9.47	28.71	16.83	16.90	23.18	18.23	18.27
Movement LOS	B	B	B	C	B	A	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	12.24			19.00			18.19			18.51		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.34											
Intersection LOS	B											
Intersection V/C	0.519											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 107: TWENTIETH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			20th St			20th St		
Base Volume Input [veh/h]	50	400	40	200	420	250	10	453	30	200	810	180
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	400	40	200	420	250	10	453	30	200	810	180
Peak Hour Factor	0.8343	0.8343	0.8343	0.8812	0.8812	0.8812	0.9623	0.9623	0.9623	0.9469	0.9469	0.9469
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	120	12	57	119	71	3	118	8	53	214	48
Total Analysis Volume [veh/h]	60	479	48	227	477	284	10	471	31	211	855	190
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	15			44			23			45		
Bicycle Volume [bicycles/h]	1			6			6			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	15	0	0	22	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	34	34	34	34	34	34	27	27	27	27	27	27
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.48	0.39	0.39	0.39	0.39	0.39	0.39
(v / s)_j Volume / Saturation Flow Rate	0.08	0.13	0.03	0.25	0.21	0.22	0.02	0.13	0.02	0.23	0.28	0.29
s, saturation flow rate [veh/h]	712	3618	1572	925	1900	1607	548	3618	1536	923	1900	1761
c, Capacity [veh/h]	327	1745	759	455	917	775	159	1397	593	343	734	680
d1, Uniform Delay [s]	17.99	10.80	9.67	17.80	11.92	12.04	28.77	15.16	13.46	24.84	18.40	18.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.13	0.14
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.24	0.39	0.16	3.88	1.55	1.95	0.06	0.05	0.01	0.67	1.76	2.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.18	0.27	0.06	0.50	0.44	0.46	0.06	0.34	0.05	0.62	0.73	0.75
d, Delay for Lane Group [s/veh]	19.22	11.19	9.83	21.68	13.47	13.98	28.83	15.22	13.48	25.52	20.16	20.69
Lane Group LOS	B	B	A	C	B	B	C	B	B	C	C	C
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.81	2.14	0.40	3.25	4.11	3.71	0.15	2.46	0.29	3.20	7.13	6.84
50th-Percentile Queue Length [ft]	20.34	53.62	10.04	81.31	102.68	92.66	3.78	61.38	7.20	80.11	178.33	171.01
95th-Percentile Queue Length [veh]	1.46	3.86	0.72	5.85	7.39	6.67	0.27	4.42	0.52	5.77	11.51	11.13
95th-Percentile Queue Length [ft]	36.61	96.51	18.07	146.37	184.82	166.78	6.80	110.48	12.96	144.20	287.83	278.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.22	11.19	9.83	21.68	13.54	13.98	28.83	15.22	13.48	25.52	20.36	20.69
Movement LOS	B	B	A	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	11.90			15.54			15.38			21.27		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	17.03											
Intersection LOS	B											
Intersection V/C	0.533											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 108: TWENTIETH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	40.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.724

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			20th St			20th St		
Base Volume Input [veh/h]	90	580	60	420	900	50	120	323	360	184	966	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	580	60	420	900	50	120	323	360	184	966	50
Peak Hour Factor	0.8987	0.8987	0.8987	0.9510	0.9510	0.9510	0.9422	0.9422	0.9422	0.8074	0.8074	0.8074
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	161	17	110	237	13	32	86	96	57	299	15
Total Analysis Volume [veh/h]	100	645	67	442	946	53	127	343	382	228	1196	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			37			20			19		
Bicycle Volume [bicycles/h]	7			22			10			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	30	30	0
Amber [s]	4.0	4.0	0.0	4.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	17	44	0	13	40	0	23	50	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	14	0	0	28	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.0	3.0	0.0	3.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	5.00	5.00	5.00	4.80	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	3.00	3.00	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	56	39	39	57	45	45	54	38	38	54	42	42
g / C, Green / Cycle	0.47	0.33	0.33	0.47	0.38	0.38	0.45	0.31	0.31	0.45	0.35	0.35
(v / s)_j Volume / Saturation Flow Rate	0.13	0.19	0.19	0.25	0.26	0.27	0.18	0.18	0.25	0.22	0.33	0.34
s, saturation flow rate [veh/h]	788	1900	1824	1755	1900	1855	689	1900	1529	1025	1900	1862
c, Capacity [veh/h]	328	624	599	832	713	696	254	595	479	380	671	658
d1, Uniform Delay [s]	21.74	33.41	33.48	22.21	31.85	31.96	27.38	34.55	37.74	25.45	37.65	37.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.20	0.08	0.33	0.33
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.40	3.89	4.13	2.43	5.79	6.10	6.91	0.33	5.60	1.10	17.28	18.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

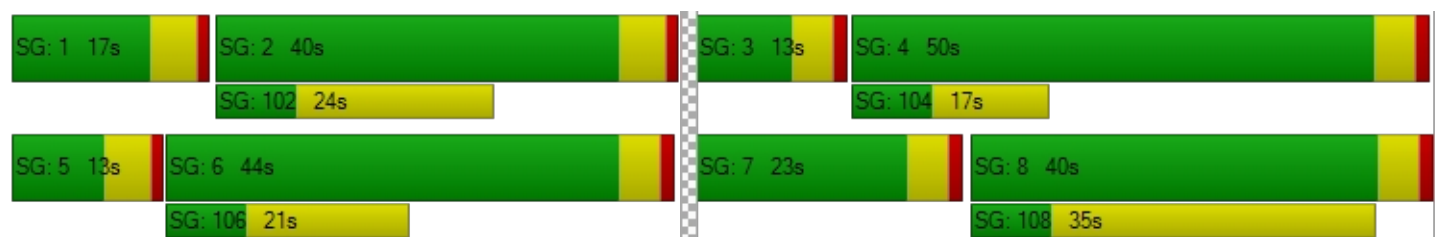
X, volume / capacity	0.31	0.58	0.58	0.53	0.71	0.71	0.50	0.58	0.80	0.60	0.94	0.95
d, Delay for Lane Group [s/veh]	24.14	37.30	37.61	24.64	37.64	38.06	34.28	34.88	43.34	26.55	54.93	56.58
Lane Group LOS	C	D	D	C	D	D	C	C	D	C	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.92	9.98	9.72	10.01	14.33	14.22	2.60	8.43	10.93	4.15	20.95	21.01
50th-Percentile Queue Length [ft]	48.06	249.53	242.92	250.20	358.24	355.47	65.01	210.72	273.32	103.83	523.76	525.15
95th-Percentile Queue Length [veh]	3.46	15.16	14.83	15.20	20.54	20.40	4.68	13.19	16.36	7.48	28.46	28.52
95th-Percentile Queue Length [ft]	86.51	379.06	370.72	379.90	513.44	510.08	117.02	329.75	408.89	186.89	711.42	713.06

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.14	37.43	37.61	24.64	37.83	38.06	34.28	34.88	43.34	26.55	55.70	56.58
Movement LOS	C	D	D	C	D	D	C	C	D	C	E	E
d_A, Approach Delay [s/veh]	35.81			33.79			38.58			51.27		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	40.70											
Intersection LOS	D											
Intersection V/C	0.724											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 109: TWENTIETH ST/I-10 EB OFF-RAMP**

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

**Intersection Setup**

Name	Northeastbound		Northwestbound		Southeastbound	
Approach	Northeastbound		Northwestbound		Southeastbound	
Lane Configuration	↵↵		↑↑		↑↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Northeastbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	360	270	0	483	744	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	360	270	0	483	744	0
Peak Hour Factor	0.9331	0.9331	1.0000	0.9182	0.9096	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	96	72	0	132	204	0
Total Analysis Volume [veh/h]	386	289	0	526	818	0
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		0	
Bicycle Volume [bicycles/h]	11		0		0	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	85.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	2	0	0	8	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	0	0	7	7	0
Maximum Green [s]	25	0	0	30	30	0
Amber [s]	3.6	0.0	0.0	3.6	3.6	0.0
All red [s]	1.0	0.0	0.0	1.0	1.0	0.0
Split [s]	30	0	0	60	60	0
Vehicle Extension [s]	2.0	0.0	0.0	2.0	2.0	0.0
Walk [s]	7	0	0	7	7	0
Pedestrian Clearance [s]	16	0	0	7	12	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	No			Yes	Yes	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	20	20	61	61
g / C, Green / Cycle	0.22	0.22	0.68	0.68
(v / s)_j Volume / Saturation Flow Rate	0.19	0.20	0.15	0.23
s, saturation flow rate [veh/h]	1810	1633	3618	3618
c, Capacity [veh/h]	396	357	2455	2455
d1, Uniform Delay [s]	34.02	34.14	5.42	5.99
k, delay calibration	0.15	0.16	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.53	11.94	0.20	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

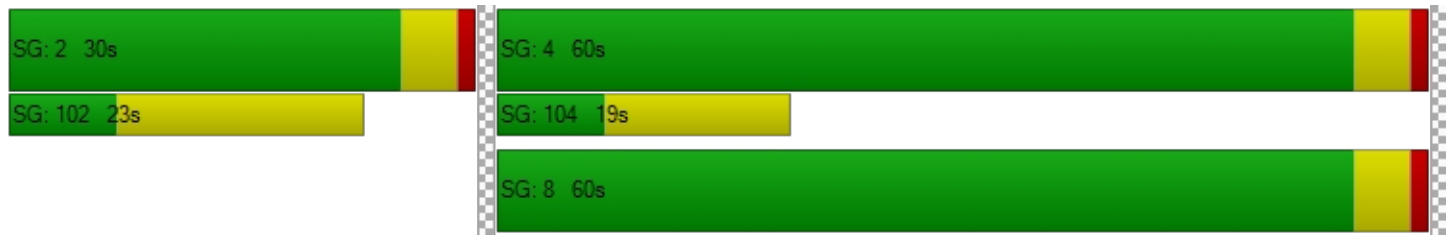
X, volume / capacity	0.89	0.90	0.21	0.33
d, Delay for Lane Group [s/veh]	43.56	46.08	5.62	6.36
Lane Group LOS	D	D	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	7.82	7.41	1.65	2.85
50th-Percentile Queue Length [ft]	195.49	185.14	41.33	71.17
95th-Percentile Queue Length [veh]	12.41	11.87	2.98	5.12
95th-Percentile Queue Length [ft]	310.14	296.71	74.39	128.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.85	46.08	0.00	5.62	6.36	0.00
Movement LOS	D	D		A	A	
d_A, Approach Delay [s/veh]	44.76		5.62		6.36	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	19.01					
Intersection LOS	B					
Intersection V/C	0.424					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 110: TWENTIETH STREET/DELAWARE AVENUE**

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

**Intersection Setup**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			T T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			Delaware Ave			20th St			20th St		
Base Volume Input [veh/h]	40	100	90	10	30	30	20	423	20	18	1134	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	100	90	10	30	30	20	423	20	18	1134	70
Peak Hour Factor	0.7415	0.7415	0.7415	0.7286	0.7286	0.7286	0.8951	0.8951	0.8951	0.9907	0.9159	0.9159
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	34	30	3	10	10	6	118	6	5	310	19
Total Analysis Volume [veh/h]	54	135	121	14	41	41	22	473	22	18	1238	76
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11			7			8			10		
Bicycle Volume [bicycles/h]	1			2			0			2		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	55	0	0	55	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	11	0	0	11	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	19	19	62	62	62	62	62
g / C, Green / Cycle	0.21	0.21	0.69	0.69	0.69	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.18	0.06	0.05	0.13	0.13	0.35	0.35
s, saturation flow rate [veh/h]	1693	1591	425	1900	1869	1900	1855
c, Capacity [veh/h]	398	375	289	1312	1291	1312	1281
d1, Uniform Delay [s]	34.37	29.87	12.19	4.95	4.95	6.58	6.66
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	0.13	0.51	0.32	0.33	1.37	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

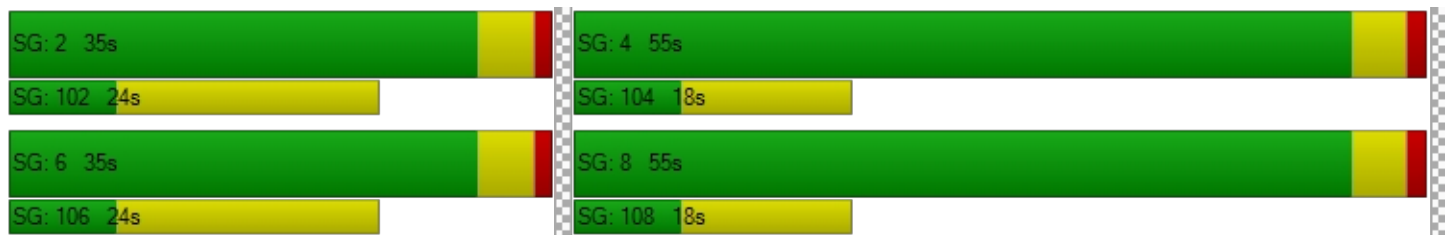
X, volume / capacity	0.78	0.26	0.08	0.19	0.19	0.50	0.51
d, Delay for Lane Group [s/veh]	35.64	30.00	12.70	5.27	5.28	7.95	8.13
Lane Group LOS	D	C	B	A	A	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.46	1.71	0.27	1.51	1.49	5.37	5.46
50th-Percentile Queue Length [ft]	161.38	42.72	6.70	37.67	37.28	134.23	136.44
95th-Percentile Queue Length [veh]	10.62	3.08	0.48	2.71	2.68	9.17	9.29
95th-Percentile Queue Length [ft]	265.55	76.89	12.06	67.81	67.11	229.23	232.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	35.64	35.64	35.64	30.00	30.00	30.00	12.70	5.28	5.28	0.00	8.03	8.13
Movement LOS	D	D	D	C	C	C	B	A	A		A	A
d_A, Approach Delay [s/veh]	35.64			30.00			5.59			8.04		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	12.24											
Intersection LOS	B											
Intersection V/C	0.537											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 111: TWENTIETH STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	59.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			20th St			20th St		
Base Volume Input [veh/h]	30	960	98	80	680	240	22	193	50	410	554	200
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	960	98	80	680	240	22	193	50	410	554	200
Peak Hour Factor	0.9410	0.9410	0.9410	0.9898	0.9898	0.9898	0.8961	0.8961	0.8961	0.9030	0.9030	0.9030
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	255	26	20	172	61	6	54	14	114	153	55
Total Analysis Volume [veh/h]	32	1020	104	81	687	242	25	215	56	454	614	221
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	32			61			89			116		
Bicycle Volume [bicycles/h]	6			13			20			31		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	5
Auxiliary Signal Groups												4,5
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	2	7	0	2	7	0	0	7	0	7	7	2
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	15
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	12	23	0	12	23	0	0	30	0	25	55	12
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	13	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	No	Yes		No	Yes			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	33	24	24	33	24	24	27	27	27	48	48	56
g / C, Green / Cycle	0.37	0.27	0.27	0.37	0.27	0.27	0.30	0.30	0.30	0.53	0.53	0.63
(v / s)_j Volume / Saturation Flow Rate	0.04	0.30	0.32	0.10	0.26	0.28	0.03	0.07	0.08	0.32	0.32	0.14
s, saturation flow rate [veh/h]	856	1900	1753	771	1900	1575	817	1900	1695	1398	1900	1554
c, Capacity [veh/h]	271	517	477	268	516	428	123	562	501	796	1005	973
d1, Uniform Delay [s]	21.70	32.76	32.76	22.50	32.10	32.79	41.66	24.07	24.22	13.58	14.76	7.33
k, delay calibration	0.50	0.50	0.50	0.07	0.50	0.50	0.04	0.04	0.04	0.09	0.09	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.89	70.95	92.83	0.43	27.50	53.14	0.30	0.08	0.10	0.52	0.48	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

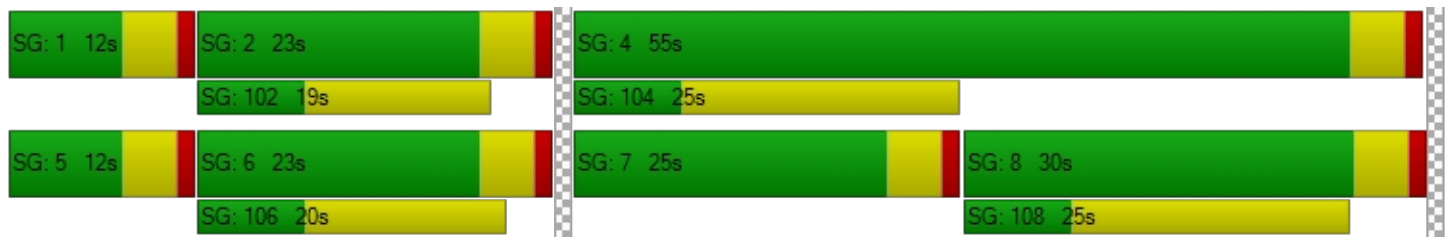
X, volume / capacity	0.12	1.10	1.16	0.30	0.94	1.04	0.20	0.25	0.27	0.57	0.61	0.23
d, Delay for Lane Group [s/veh]	22.58	103.71	125.60	22.93	59.59	85.94	41.96	24.15	24.33	14.11	15.24	7.37
Lane Group LOS	C	F	F	C	E	F	D	C	C	B	B	A
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.48	20.93	22.21	1.11	13.81	15.20	0.54	2.17	2.10	5.50	8.19	1.67
50th-Percentile Queue Length [ft]	12.00	523.21	555.17	27.71	345.34	379.91	13.52	54.25	52.62	137.39	204.64	41.77
95th-Percentile Queue Length [veh]	0.86	30.15	32.60	1.99	19.91	22.05	0.97	3.91	3.79	9.34	12.88	3.01
95th-Percentile Queue Length [ft]	21.61	753.79	814.92	49.87	497.72	551.34	24.33	97.65	94.72	233.50	321.94	75.19

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.58	113.35	125.60	22.93	67.31	85.94	41.96	24.22	24.33	14.11	15.24	7.37
Movement LOS	C	F	F	C	E	F	D	C	C	B	B	A
d_A, Approach Delay [s/veh]	111.94			68.21			25.73			13.49		
Approach LOS	F			E			C			B		
d_I, Intersection Delay [s/veh]	59.53											
Intersection LOS	E											
Intersection V/C	0.670											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 115: TWENTY-THIRD STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.575

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	60	1288	54	55	1162	50	62	123	68	60	62	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1288	54	55	1162	50	62	123	68	60	62	50
Peak Hour Factor	0.9659	0.9659	0.9659	0.9603	0.9603	0.9603	0.8179	0.8179	0.8179	0.8036	0.8036	0.8036
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	333	14	14	303	13	19	38	21	19	19	16
Total Analysis Volume [veh/h]	62	1333	56	57	1210	52	76	150	83	75	77	62
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			24			56			44		
Bicycle Volume [bicycles/h]	1			4			3			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	6.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	41	41	41	41	41	41	39	39	39	39	39	39
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	51	51	51	51	51	51	20	20
g / C, Green / Cycle	0.63	0.63	0.63	0.63	0.63	0.63	0.25	0.25
(v / s)_j Volume / Saturation Flow Rate	0.14	0.37	0.37	0.14	0.33	0.34	0.20	0.18
s, saturation flow rate [veh/h]	446	1900	1861	395	1900	1862	1519	1209
c, Capacity [veh/h]	279	1203	1179	246	1203	1179	439	365
d1, Uniform Delay [s]	15.37	8.51	8.55	17.12	8.08	8.11	27.89	26.34
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.83	2.05	2.14	2.19	1.66	1.72	0.78	0.56
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

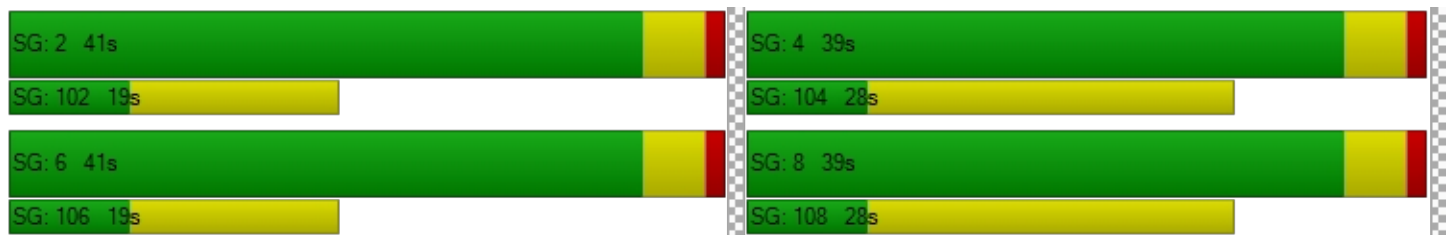
X, volume / capacity	0.22	0.58	0.59	0.23	0.53	0.53	0.70	0.59
d, Delay for Lane Group [s/veh]	17.20	10.55	10.69	19.31	9.74	9.83	28.67	26.90
Lane Group LOS	B	B	B	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.84	6.26	6.25	0.84	5.38	5.34	5.34	3.51
50th-Percentile Queue Length [ft]	20.99	156.62	156.31	20.98	134.40	133.55	133.56	87.77
95th-Percentile Queue Length [veh]	1.51	10.37	10.35	1.51	9.18	9.13	9.13	6.32
95th-Percentile Queue Length [ft]	37.78	259.24	258.83	37.77	229.47	228.32	228.32	157.98

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	17.20	10.62	10.69	19.31	9.78	9.83	28.67	28.67	28.67	26.90	26.90	26.90
Movement LOS	B	B	B	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.90			10.20			28.67			26.90		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	13.33											
Intersection LOS	B											
Intersection V/C	0.575											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 116: TWENTY-THIRD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.579

**Intersection Setup**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Approach	Westbound			Northeastbound			Southwestbound			Southeastbound		
Lane Configuration				↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			30.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	23rd Street			Santa Monica Blvd			Santa Monica Blvd			23rd St		
Base Volume Input [veh/h]	0	0	0	94	1544	82	1	1493	177	82	68	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	94	1544	82	1	1493	177	82	68	91
Peak Hour Factor	1.0000	1.0000	1.0000	0.9713	0.9713	0.9713	0.9502	0.9502	0.9502	0.8571	0.7659	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	24	397	21	0	393	47	24	22	27
Total Analysis Volume [veh/h]	0	0	0	97	1590	84	1	1571	186	96	89	106
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			30			27			0		
Bicycle Volume [bicycles/h]	0			2			6			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	76.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	2	0	0	6	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	0	0	0	30	0	0	30	0	0	25	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	87	0	0	87	0	0	33	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	12	0	0	18	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall					Yes			Yes			No	
Maximum Recall					No			No			No	
Pedestrian Recall					No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	C	C	R
C, Cycle Length [s]		120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		97	97	97	97	97	97	14	14
g / C, Green / Cycle		0.81	0.81	0.81	0.81	0.81	0.81	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate		0.35	0.44	0.45	0.00	0.47	0.48	0.10	0.07
s, saturation flow rate [veh/h]		277	1900	1860	301	1900	1821	1852	1490
c, Capacity [veh/h]		228	1533	1501	249	1533	1469	215	173
d1, Uniform Delay [s]		14.20	4.00	4.05	8.32	4.18	4.29	51.96	50.35
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		5.69	1.41	1.49	0.03	1.59	1.78	3.85	1.30
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.42	0.55	0.56	0.00	0.58	0.59	0.86	0.61
d, Delay for Lane Group [s/veh]		19.89	5.41	5.54	8.35	5.76	6.06	55.81	51.65
Lane Group LOS		B	A	A	A	A	A	E	D
Critical Lane Group		No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]		1.88	5.95	6.00	0.01	6.93	7.06	5.64	3.07
50th-Percentile Queue Length [ft]		47.05	148.64	150.02	0.29	173.20	176.52	140.94	76.63
95th-Percentile Queue Length [veh]		3.39	9.94	10.02	0.02	11.24	11.42	9.53	5.52
95th-Percentile Queue Length [ft]		84.68	248.62	250.46	0.53	281.12	285.47	238.29	137.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	19.89	5.47	5.54	8.35	5.90	6.06	55.81	55.81	51.65
Movement LOS				B	A	A	A	A	A	E	E	D
d_A, Approach Delay [s/veh]	0.00			6.27			5.92			54.30		
Approach LOS	A			A			A			D		
d_I, Intersection Delay [s/veh]	9.76											
Intersection LOS	A											
Intersection V/C	0.579											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 117: TWENTY-THIRD STREET/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			23rd St					
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			23rd St					
Base Volume Input [veh/h]	10	1120	160	154	1020	20	140	10	132	20	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	1120	160	154	1020	20	140	10	132	20	10	10
Peak Hour Factor	0.9808	0.9808	0.9808	0.9627	0.9627	0.9627	0.8829	0.8829	0.8829	0.6667	0.6667	0.6667
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	285	41	40	265	5	40	3	37	7	4	4
Total Analysis Volume [veh/h]	10	1142	163	160	1059	21	159	11	150	30	15	15
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			0			45			24		
Bicycle Volume [bicycles/h]	3			0			15			7		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	100.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	0	2	0	1	6	0	0	8	1	0	7	0
Auxiliary Signal Groups									1,8			
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	7	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	15	0	15	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	47	0	25	72	0	0	25	25	0	23	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	11	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	C	C	R	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	75	75	86	86	86	14	14	6
g / C, Green / Cycle	0.62	0.62	0.72	0.72	0.72	0.11	0.11	0.05
(v / s)_j Volume / Saturation Flow Rate	0.37	0.38	0.27	0.29	0.29	0.09	0.10	0.03
s, saturation flow rate [veh/h]	1874	1623	582	1900	1886	1815	1549	1777
c, Capacity [veh/h]	1198	1011	407	1368	1357	208	177	90
d1, Uniform Delay [s]	13.46	13.75	10.65	6.59	6.59	51.89	52.07	55.93
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.07	2.75	2.84	0.86	0.87	3.02	4.23	3.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

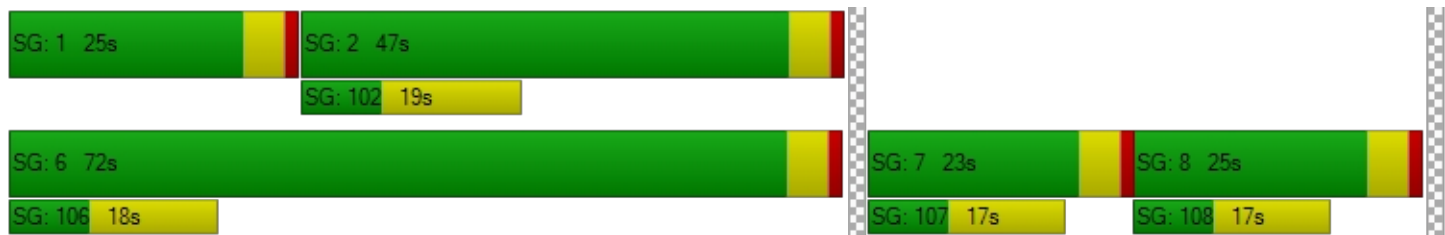
X, volume / capacity	0.58	0.61	0.39	0.40	0.40	0.82	0.85	0.67
d, Delay for Lane Group [s/veh]	15.53	16.50	13.49	7.45	7.46	54.91	56.30	59.06
Lane Group LOS	B	B	B	A	A	D	E	E
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes
50th-Percentile Queue Length [veh]	11.10	10.18	1.41	5.04	5.02	5.21	4.67	1.85
50th-Percentile Queue Length [ft]	277.43	254.39	35.33	126.05	125.38	130.27	116.70	46.25
95th-Percentile Queue Length [veh]	16.56	15.41	2.54	8.72	8.69	8.95	8.21	3.33
95th-Percentile Queue Length [ft]	414.01	385.18	63.60	218.11	217.20	223.86	205.28	83.24

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	15.53	15.92	16.50	13.49	7.45	7.46	54.91	54.91	56.30	59.06	59.06	59.06
Movement LOS	B	B	B	B	A	A	D	D	E	E	E	E
d_A, Approach Delay [s/veh]	15.98			8.23			55.56			59.06		
Approach LOS	B			A			E			E		
d_I, Intersection Delay [s/veh]	17.90											
Intersection LOS	B											
Intersection V/C	0.543											

**Sequence**

Ring 1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 118: TWENTY-THIRD STREET/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┌			└			└			┌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			40.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			23rd St			23rd St		
Base Volume Input [veh/h]	0	560	80	201	630	10	120	313	76	30	284	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	560	80	201	630	10	120	313	76	30	284	10
Peak Hour Factor	1.0000	0.8997	0.8997	0.9291	0.9291	0.9291	0.8878	0.8878	0.8878	0.8663	0.8663	0.8663
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	156	22	54	170	3	34	88	21	9	82	3
Total Analysis Volume [veh/h]	0	622	89	216	678	11	135	353	86	35	328	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			1			20			21		
Bicycle Volume [bicycles/h]	4			1			8			10		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	15	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	38	0	17	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	15	0	0	15	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes		No	Yes			No			No	
Maximum Recall		No		No	No			No			No	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	L	C	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	41	53	53	28	28	28	28	28
g / C, Green / Cycle	0.45	0.58	0.58	0.31	0.31	0.31	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.39	0.23	0.36	0.13	0.24	0.04	0.17	0.01
s, saturation flow rate [veh/h]	1846	947	1893	1066	1829	965	1900	1551
c, Capacity [veh/h]	837	415	1106	240	574	154	596	487
d1, Uniform Delay [s]	21.87	16.35	12.24	37.26	27.89	39.84	25.62	21.36
k, delay calibration	0.50	0.50	0.50	0.04	0.18	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.50	4.62	2.65	0.78	3.61	0.28	0.30	0.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

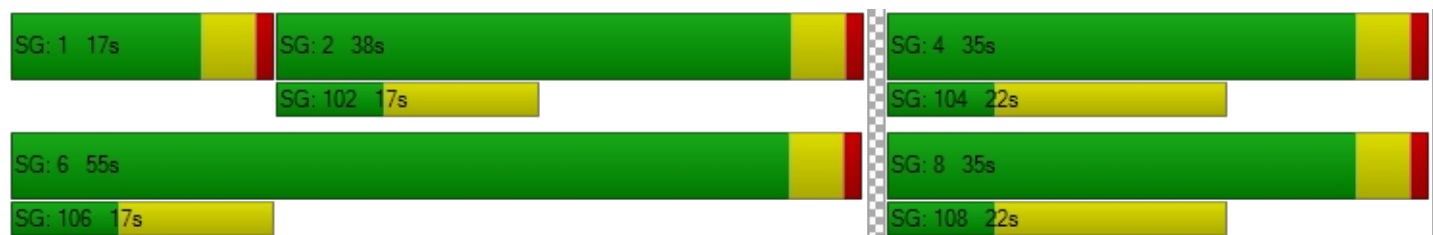
X, volume / capacity	0.85	0.52	0.62	0.56	0.77	0.23	0.55	0.02
d, Delay for Lane Group [s/veh]	32.37	20.97	14.88	38.03	31.50	40.12	25.92	21.37
Lane Group LOS	C	C	B	D	C	D	C	C
Critical Lane Group	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	14.63	2.26	8.45	2.89	8.83	0.75	5.80	0.18
50th-Percentile Queue Length [ft]	365.67	56.51	211.15	72.35	220.71	18.86	145.07	4.41
95th-Percentile Queue Length [veh]	20.90	4.07	13.21	5.21	13.70	1.36	9.75	0.32
95th-Percentile Queue Length [ft]	522.48	101.72	330.30	130.23	342.53	33.95	243.83	7.94

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	32.37	32.37	20.97	14.88	14.88	38.03	31.50	31.50	40.12	25.92	21.37
Movement LOS		C	C	C	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]		32.37		16.34			33.04			27.10		
Approach LOS		C		B			C			C		
d_I, Intersection Delay [s/veh]	26.09											
Intersection LOS	C											
Intersection V/C	0.688											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-






**Intersection Level Of Service Report**

**Intersection 119: TWENTY-FOURTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	4.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

**Intersection Setup**

Name	Montana Ave		Montana Ave		24th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		25.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		24th St	
Base Volume Input [veh/h]	20	625	557	10	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	625	557	10	10	10
Peak Hour Factor	0.9528	0.9528	0.9185	0.9185	0.6429	0.6429
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	164	152	3	4	4
Total Analysis Volume [veh/h]	21	656	606	11	16	16
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20		0		11	
Bicycle Volume [bicycles/h]	0		0		3	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C
C, Cycle Length [s]	20	20	20	20
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	10	10	10	1
g / C, Green / Cycle	0.48	0.48	0.48	0.06
(v / s)_i Volume / Saturation Flow Rate	0.03	0.35	0.33	0.02
s, saturation flow rate [veh/h]	816	1900	1894	1707
c, Capacity [veh/h]	475	901	898	107
d1, Uniform Delay [s]	7.58	4.19	4.07	8.89
k, delay calibration	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.35	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

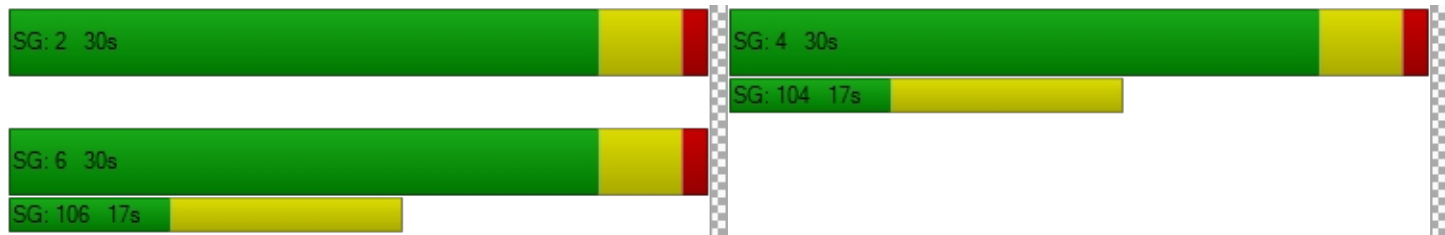
X, volume / capacity	0.04	0.73	0.69	0.30
d, Delay for Lane Group [s/veh]	7.60	4.62	4.43	9.47
Lane Group LOS	A	A	A	A
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.05	0.33	0.30	0.09
50th-Percentile Queue Length [ft]	1.17	8.37	7.40	2.13
95th-Percentile Queue Length [veh]	0.08	0.60	0.53	0.15
95th-Percentile Queue Length [ft]	2.10	15.07	13.32	3.83

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	7.60	4.62	4.43	4.43	9.47	9.47
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.71		4.43		9.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.70					
Intersection LOS	A					
Intersection V/C	0.364					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 120: CLOVERFIELD BOULEVARD/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

**Intersection Setup**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration	↑		↑		↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Santa Monica Blvd		Santa Monica Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	1117	585	50	1231	521	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1117	585	50	1231	521	115
Peak Hour Factor	0.9371	0.9371	0.9084	0.9084	0.8509	0.8509
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	298	156	14	339	153	34
Total Analysis Volume [veh/h]	1192	624	55	1355	612	135
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		18		22	
Bicycle Volume [bicycles/h]	0		0		4	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	74.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal group	2	0	1	6	3	3
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	7	0	5	7	7	7
Maximum Green [s]	30	0	15	30	30	30
Amber [s]	3.6	0.0	3.6	3.6	3.6	3.6
All red [s]	1.0	0.0	1.0	1.0	1.0	1.0
Split [s]	50	0	30	80	40	40
Vehicle Extension [s]	2.0	0.0	2.0	2.0	2.0	2.0
Walk [s]	7	0	0	0	7	7
Pedestrian Clearance [s]	16	0	0	0	10	10
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	0.0	2.6	2.6	2.6	2.6
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	5	87	23	23
g / C, Green / Cycle	0.65	0.65	0.04	0.73	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.48	0.54	0.03	0.37	0.17	0.09
s, saturation flow rate [veh/h]	1900	1682	1810	3618	3514	1545
c, Capacity [veh/h]	1237	1095	72	2638	682	300
d1, Uniform Delay [s]	13.97	15.85	57.02	7.03	47.13	42.65
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.89	7.28	6.30	0.72	1.77	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.73	0.83	0.77	0.51	0.90	0.45
d, Delay for Lane Group [s/veh]	17.86	23.13	63.32	7.75	48.91	43.04
Lane Group LOS	B	C	E	A	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	16.94	19.91	1.78	6.92	9.04	3.58
50th-Percentile Queue Length [ft]	423.40	497.85	44.42	173.11	226.10	89.41
95th-Percentile Queue Length [veh]	23.69	27.23	3.20	11.24	13.98	6.44
95th-Percentile Queue Length [ft]	592.13	680.81	79.96	281.00	349.40	160.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.11	23.13	63.32	7.75	48.91	43.04
Movement LOS	B	C	E	A	D	D
d_A, Approach Delay [s/veh]	20.49		9.92		47.85	
Approach LOS	C		A		D	
d_I, Intersection Delay [s/veh]	21.88					
Intersection LOS	C					
Intersection V/C	0.744					

**Sequence**

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 121: CLOVERFIELD BOULEVARD/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

**Intersection Setup**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	62	361	249	70	254	80	326	697	100	90	425	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	361	249	70	254	80	326	697	100	90	425	10
Peak Hour Factor	0.8852	0.8852	0.8852	0.8341	0.8341	0.8341	0.8603	0.8603	0.8603	0.8248	0.8248	0.8248
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	102	70	21	76	24	95	203	29	27	129	3
Total Analysis Volume [veh/h]	70	408	281	84	305	96	379	810	116	109	515	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	30			39			52			25		
Bicycle Volume [bicycles/h]	2			3			29			32		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	20.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	26	0	0	26	0	12	32	0	0	32	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes		No	No			No	
Maximum Recall		No			No		No	No			No	
Pedestrian Recall		No			No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	31	31	31	31	30	30	30	18	18	18
g / C, Green / Cycle	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.26	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.06	0.21	0.18	0.09	0.16	0.06	0.32	0.25	0.26	0.18	0.14	0.14
s, saturation flow rate [veh/h]	1083	1900	1538	982	1900	1566	1200	1900	1769	608	1900	1871
c, Capacity [veh/h]	431	835	676	354	835	688	558	817	760	119	487	480
d1, Uniform Delay [s]	18.22	14.06	13.51	21.25	13.16	11.77	15.78	15.20	15.37	34.98	22.56	22.59
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.21	0.07	0.09	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	2.04	1.88	1.57	1.24	0.42	2.76	0.44	0.62	10.04	0.35	0.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

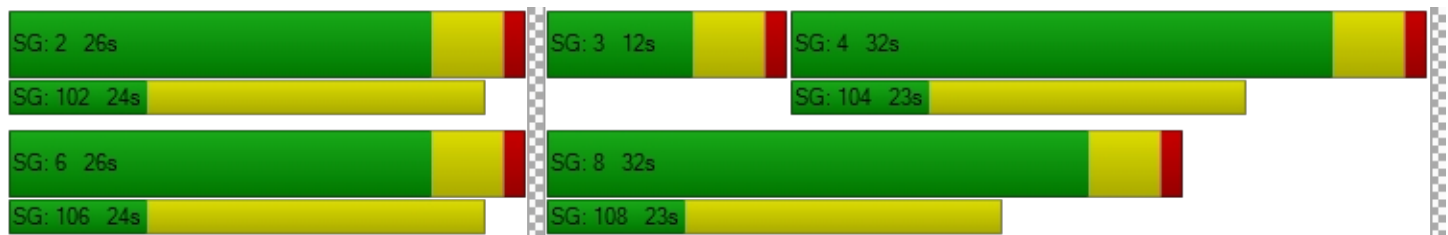
X, volume / capacity	0.16	0.49	0.42	0.24	0.37	0.14	0.68	0.58	0.60	0.91	0.54	0.55
d, Delay for Lane Group [s/veh]	19.03	16.11	15.40	22.83	14.39	12.19	18.54	15.64	15.99	45.02	22.91	22.96
Lane Group LOS	B	B	B	C	B	B	B	B	B	D	C	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.88	4.53	3.04	1.20	3.12	0.88	4.37	5.27	5.16	2.14	3.61	3.59
50th-Percentile Queue Length [ft]	21.99	113.29	75.97	30.01	78.10	21.99	109.36	131.75	128.97	53.55	90.19	89.71
95th-Percentile Queue Length [veh]	1.58	8.02	5.47	2.16	5.62	1.58	7.80	9.03	8.88	3.86	6.49	6.46
95th-Percentile Queue Length [ft]	39.58	200.57	136.74	54.02	140.58	39.58	195.12	225.87	222.10	96.40	162.35	161.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	19.03	16.11	15.40	22.83	14.39	12.19	18.54	15.79	15.99	45.02	22.94	22.96
Movement LOS	B	B	B	C	B	B	B	B	B	D	C	C
d_A, Approach Delay [s/veh]	16.11			15.42			16.60			26.72		
Approach LOS	B			B			B			C		
d_I, Intersection Delay [s/veh]	18.33											
Intersection LOS	B											
Intersection V/C	0.505											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 122: CLOVERFIELD BOULEVARD/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	40.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	380	300	90	600	68	370	839	70	22	956	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	380	300	90	600	68	370	839	70	22	956	10
Peak Hour Factor	0.8583	0.8583	0.8583	0.8691	0.8691	0.8691	0.9008	0.9008	0.9008	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	111	87	26	173	20	103	233	19	6	268	3
Total Analysis Volume [veh/h]	58	443	350	104	690	78	411	931	78	25	1073	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	33			24			50			14		
Bicycle Volume [bicycles/h]	0			5			9			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	0	3	8	1	7	4	0
Auxiliary Signal Groups			2,3						1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	15	15	30	0	15	30	15	15	7	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	13	40	17	20	47	0	17	43	20	17	43	0
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Walk [s]	0	5	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	22	0	0	17	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes	No	No	Yes		No	No	No	No	No	
Maximum Recall	No	No	No	No	No		No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No		No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	25	55	8	27	27	12	65	77	4	56	56
g / C, Green / Cycle	0.05	0.21	0.46	0.07	0.23	0.23	0.10	0.54	0.65	0.03	0.47	0.47
(v / s)_j Volume / Saturation Flow Rate	0.03	0.12	0.22	0.04	0.21	0.21	0.12	0.26	0.05	0.01	0.29	0.29
s, saturation flow rate [veh/h]	1810	3618	1562	2796	1900	1818	3514	3618	1573	1810	1900	1892
c, Capacity [veh/h]	90	747	712	203	428	410	364	1947	1015	60	889	885
d1, Uniform Delay [s]	55.94	43.04	22.92	56.11	45.32	45.42	53.78	17.23	7.94	56.88	23.80	23.81
k, delay calibration	0.04	0.04	0.13	0.04	0.06	0.06	0.04	0.50	0.04	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.81	0.28	0.62	0.75	4.64	5.59	61.54	0.84	0.01	1.72	3.13	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.64	0.59	0.49	0.51	0.91	0.92	1.13	0.48	0.08	0.42	0.61	0.61
d, Delay for Lane Group [s/veh]	58.75	43.33	23.54	56.86	49.95	51.01	115.32	18.07	7.95	58.60	26.92	26.95
Lane Group LOS	E	D	C	E	D	D	F	B	A	E	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.80	5.98	7.01	1.57	11.83	11.55	8.59	8.07	0.74	0.77	12.06	12.03
50th-Percentile Queue Length [ft]	44.88	149.48	175.21	39.33	295.87	288.78	214.75	201.68	18.39	19.31	301.58	300.73
95th-Percentile Queue Length [veh]	3.23	9.99	11.35	2.83	17.48	17.12	14.02	12.73	1.32	1.39	17.76	17.72
95th-Percentile Queue Length [ft]	80.79	249.74	283.75	70.79	436.92	428.12	350.57	318.14	33.11	34.77	443.98	442.93

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.75	43.33	23.54	56.86	50.41	51.01	115.32	18.07	7.95	58.60	26.94	26.95
Movement LOS	E	D	C	E	D	D	F	B	A	E	C	C
d_A, Approach Delay [s/veh]	36.24			51.23			45.66			27.65		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	40.22											
Intersection LOS	D											
Intersection V/C	0.700											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 123: CLOVERFIELD BOULEVARD/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	59.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

**Intersection Setup**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Olympic Blvd			Olympic Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	60	800	104	230	1250	92	100	1028	20	129	1007	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	800	104	230	1250	92	100	1028	20	129	1007	60
Peak Hour Factor	0.8932	0.8932	0.8932	0.9781	0.9781	0.9781	0.8451	0.8451	0.8451	0.9205	0.9205	0.9205
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	224	29	59	319	24	30	304	6	35	273	16
Total Analysis Volume [veh/h]	67	896	116	235	1278	94	118	1216	24	140	1094	65
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	35			54			34			31		
Bicycle Volume [bicycles/h]	5			16			19			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	75.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	15	42	0	20	47	0	20	43	0	15	38	0
Vehicle Extension [s]	2.0	4.0	0.0	2.0	4.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No	No		No	Yes		No	Yes	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	6	41	41	10	46	46	6	43	43	7	44	44
g / C, Green / Cycle	0.05	0.34	0.34	0.08	0.38	0.38	0.05	0.36	0.36	0.06	0.37	0.37
(v / s)_j Volume / Saturation Flow Rate	0.04	0.25	0.08	0.07	0.35	0.06	0.03	0.23	0.23	0.04	0.43	0.44
s, saturation flow rate [veh/h]	1810	3618	1544	3514	3618	1542	3514	3618	1872	3514	1800	900
c, Capacity [veh/h]	87	1246	532	294	1375	586	175	1311	679	197	664	332
d1, Uniform Delay [s]	56.47	34.26	27.87	53.98	35.63	24.54	56.05	31.48	31.52	55.65	37.85	37.85
k, delay calibration	0.04	0.15	0.15	0.04	0.15	0.15	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.43	1.13	0.29	1.93	4.62	0.18	1.70	2.23	4.31	1.77	86.36	107.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

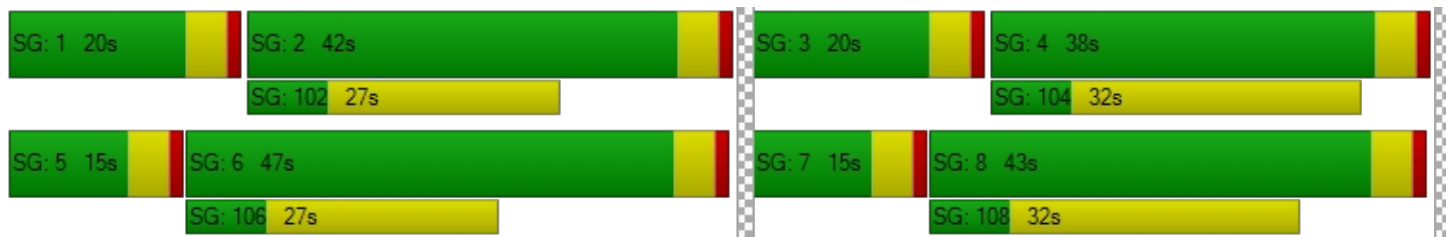
X, volume / capacity	0.77	0.72	0.22	0.80	0.93	0.16	0.68	0.62	0.63	0.71	1.16	1.18
d, Delay for Lane Group [s/veh]	61.89	35.39	28.16	55.90	40.24	24.72	57.75	33.71	35.83	57.43	124.21	145.49
Lane Group LOS	E	D	C	E	D	C	E	C	D	E	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.23	12.28	2.59	3.48	17.75	1.74	1.80	10.08	10.89	2.13	17.52	19.48
50th-Percentile Queue Length [ft]	55.78	306.93	64.69	86.88	443.72	43.45	44.97	252.09	272.30	53.30	437.95	487.01
95th-Percentile Queue Length [veh]	4.02	18.02	4.66	6.26	24.66	3.13	3.24	15.29	16.30	3.84	26.66	29.58
95th-Percentile Queue Length [ft]	100.41	450.59	116.44	156.39	616.46	78.22	80.95	382.29	407.62	95.93	666.49	739.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	61.89	35.39	28.16	55.90	40.24	24.72	57.75	34.40	35.83	57.43	130.57	145.49
Movement LOS	E	D	C	E	D	C	E	C	D	E	F	F
d_A, Approach Delay [s/veh]	36.26			41.62			36.46			123.43		
Approach LOS	D			D			D			F		
d_I, Intersection Delay [s/veh]	59.12											
Intersection LOS	E											
Intersection V/C	0.859											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 124: CLOVERFIELD BOULEVARD/MICHIGAN AVENUE**

Control Type:	Signalized	Delay (sec / veh):	49.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.920

**Intersection Setup**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	21st St			Michigan Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	50	0	230	80	10	60	40	1428	10	20	1701	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	0	230	80	10	60	40	1428	10	20	1701	10
Peak Hour Factor	0.6949	0.6949	0.6949	0.7596	0.7596	0.7596	0.9786	0.9786	0.9786	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	83	26	3	20	10	365	3	5	447	3
Total Analysis Volume [veh/h]	72	0	331	105	13	79	41	1459	10	21	1789	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	16			12			9			6		
Bicycle Volume [bicycles/h]	1			1			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	20	65	0	15	60	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	3.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	12	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	27	27	27	27	27	5	76	76	4	74	74
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.23	0.04	0.63	0.63	0.03	0.62	0.62
(v / s)_j Volume / Saturation Flow Rate	0.05	0.00	0.21	0.07	0.06	0.02	0.27	0.27	0.01	0.66	0.69
s, saturation flow rate [veh/h]	1319	1900	1575	1424	1620	1810	3618	1893	1810	1800	900
c, Capacity [veh/h]	272	427	354	354	364	79	2279	1193	54	1109	554
d1, Uniform Delay [s]	44.64	0.00	45.56	40.72	38.16	56.00	11.17	11.17	57.01	22.99	22.99
k, delay calibration	0.04	0.04	0.19	0.11	0.11	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.19	0.00	17.39	0.46	0.36	1.92	0.58	1.10	1.68	46.21	74.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.00	0.94	0.30	0.25	0.52	0.42	0.42	0.39	1.07	1.12
d, Delay for Lane Group [s/veh]	44.83	0.00	62.95	41.18	38.52	57.92	11.75	12.27	58.69	69.20	97.06
Lane Group LOS	D	A	E	D	D	E	B	B	E	F	F
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.91	0.00	11.22	2.69	2.25	1.26	6.39	6.86	0.65	21.43	25.72
50th-Percentile Queue Length [ft]	47.63	0.00	280.43	67.16	56.23	31.43	159.68	171.51	16.26	535.63	642.91
95th-Percentile Queue Length [veh]	3.43	0.00	16.71	4.84	4.05	2.26	10.53	11.16	1.17	30.53	37.09
95th-Percentile Queue Length [ft]	85.73	0.00	417.74	120.89	101.22	56.58	263.30	278.90	29.27	763.16	927.29

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.83	0.00	62.95	41.18	38.52	38.52	57.92	11.93	12.27	58.69	78.66	97.06
Movement LOS	D	A	E	D	D	D	E	B	B	E	F	F
d_A, Approach Delay [s/veh]	59.72			39.94			13.18			78.54		
Approach LOS	E			D			B			E		
d_I, Intersection Delay [s/veh]	49.57											
Intersection LOS	D											
Intersection V/C	0.920											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 125: CLOVERFIELD BOULEVARD/I-10 WESTBOUND OFF RAMP**

Control Type:	Signalized	Delay (sec / veh):	54.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.953

**Intersection Setup**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Approach	Westbound		Northwestbound		Southeastbound	
Lane Configuration	1111		11		1111	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	I-10 WB Off Ramp		Cloverfield Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	460	1191	357	0	0	1981
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	460	1191	357	0	0	1981
Peak Hour Factor	0.9695	0.9695	0.9392	1.0000	1.0000	0.9315
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	119	307	95	0	0	532
Total Analysis Volume [veh/h]	474	1229	380	0	0	2127
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19		0		0	
Bicycle Volume [bicycles/h]	3		0		0	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Overlap	Permissive	Permissive	Permissive	Permissive
Signal group	6	7	8	0	0	4
Auxiliary Signal Groups		6,7				
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	7	7	7	0	0	7
Maximum Green [s]	30	30	30	0	0	30
Amber [s]	3.6	3.6	3.6	0.0	0.0	3.6
All red [s]	1.0	1.0	1.0	0.0	0.0	1.0
Split [s]	35	50	35	0	0	85
Vehicle Extension [s]	2.0	2.0	2.0	0.0	0.0	2.0
Walk [s]	0	0	7	0	0	7
Pedestrian Clearance [s]	0	0	16	0	0	10
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	0.0	2.6
Minimum Recall	No	Yes	No			Yes
Maximum Recall	No	No	No			No
Pedestrian Recall	No	No	No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	R	C	C
C, Cycle Length [s]	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	24	94	17	86
g / C, Green / Cycle	0.20	0.78	0.14	0.72
(v / s)_i Volume / Saturation Flow Rate	0.13	0.44	0.11	0.82
s, saturation flow rate [veh/h]	3514	2822	3618	2600
c, Capacity [veh/h]	718	2211	506	1869
d1, Uniform Delay [s]	43.89	4.98	49.60	16.86
k, delay calibration	0.04	0.31	0.04	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	0.63	0.86	69.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

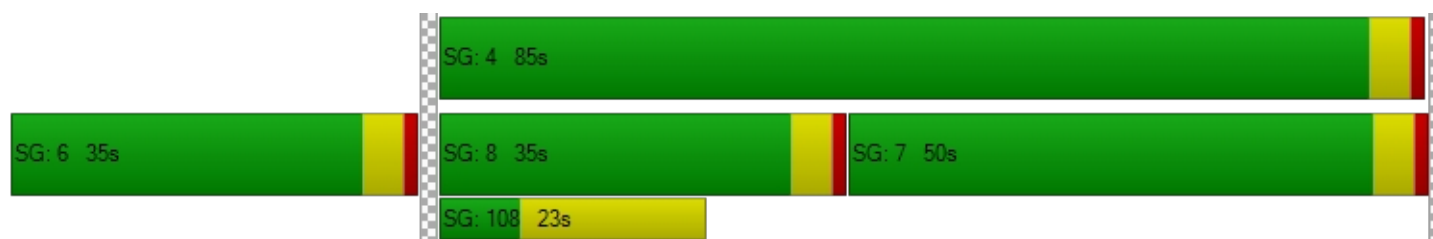
X, volume / capacity	0.66	0.56	0.75	1.14
d, Delay for Lane Group [s/veh]	44.28	5.60	50.46	86.06
Lane Group LOS	D	A	D	F
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	6.20	3.67	5.53	19.74
50th-Percentile Queue Length [ft]	155.11	91.71	138.37	493.58
95th-Percentile Queue Length [veh]	10.29	6.60	9.39	29.91
95th-Percentile Queue Length [ft]	257.24	165.08	234.83	747.87

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.28	5.60	50.46	0.00	0.00	86.06
Movement LOS	D	A	D			F
d_A, Approach Delay [s/veh]	16.37		50.46		86.06	
Approach LOS	B		D		F	
d_I, Intersection Delay [s/veh]	54.65					
Intersection LOS	D					
Intersection V/C	0.953					

**Sequence**

Ring 1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 126: CLOVERFIELD BOULEVARD/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	74.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.157

**Intersection Setup**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Delaware Ave			I-10 EB On Ramp			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	0	0	40	0	0	0	0	357	180	1142	1309	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	40	0	0	0	0	357	180	1142	1309	75
Peak Hour Factor	1.0000	1.0000	0.8654	1.0000	1.0000	1.0000	1.0000	0.8169	0.8169	0.9378	0.9378	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	12	0	0	0	0	109	55	304	349	20
Total Analysis Volume [veh/h]	0	0	46	0	0	0	0	437	220	1218	1396	80
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			22			0			0		
Bicycle Volume [bicycles/h]	6			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	115.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	0	0	0	0	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	0	0	0	7	0	7	7	0
Maximum Green [s]	0	0	0	0	0	0	0	30	0	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	55	0	65	120	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	0	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	16	0	0	10	0
Rest In Walk								No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall								No		Yes	Yes	
Maximum Recall								No		No	No	
Pedestrian Recall								No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		C	R	L	C	C
C, Cycle Length [s]		120	120	120	120	120
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		20	20	90	115	115
g / C, Green / Cycle		0.17	0.17	0.75	0.96	0.96
(v / s)_i Volume / Saturation Flow Rate		0.12	0.14	1.02	0.39	0.40
s, saturation flow rate [veh/h]		3618	1552	1200	1900	1861
c, Capacity [veh/h]		611	262	905	1827	1790
d1, Uniform Delay [s]		47.10	48.25	14.73	0.14	0.15
k, delay calibration		0.04	0.04	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.59	2.77	162.88	0.67	0.70
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

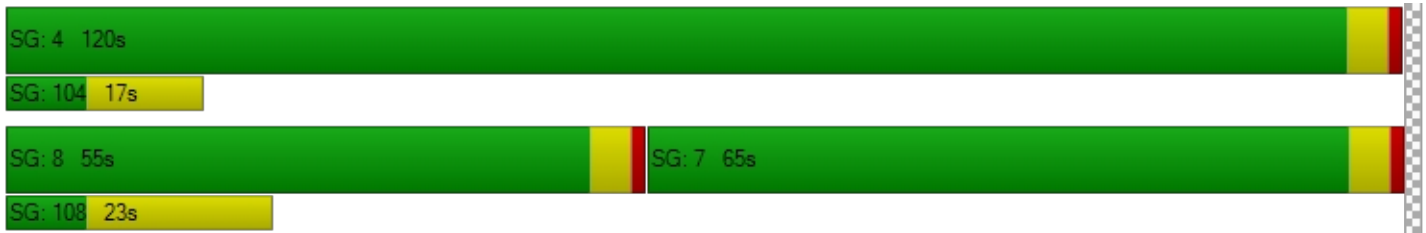
X, volume / capacity		0.72	0.84	1.35	0.40	0.41
d, Delay for Lane Group [s/veh]		47.69	51.02	177.60	0.81	0.85
Lane Group LOS		D	D	F	A	A
Critical Lane Group		No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]		6.21	6.56	30.25	0.34	0.35
50th-Percentile Queue Length [ft]		155.35	163.98	756.31	8.45	8.75
95th-Percentile Queue Length [veh]		10.30	10.76	48.56	0.61	0.63
95th-Percentile Queue Length [ft]		257.55	268.99	1214.12	15.21	15.74

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.69	51.02	177.60	0.83	0.85
Movement LOS								D	D	F	A	A
d_A, Approach Delay [s/veh]	0.00			0.00			48.80			80.75		
Approach LOS	A			A			D			F		
d_I, Intersection Delay [s/veh]	74.49											
Intersection LOS	E											
Intersection V/C	1.157											

**Sequence**

Ring 1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 127: CLOVERFIELD BOULEVARD/VIRGINIA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

**Intersection Setup**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	┤			┼			┼			┼		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Virginia Ave			Virginia Ave			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	15	30	40	20	30	30	10	517	23	50	1219	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	30	40	20	30	30	10	517	23	50	1219	0
Peak Hour Factor	0.8056	0.7708	0.7708	0.6833	0.6833	0.6833	0.8643	0.8643	0.9595	0.9411	0.9411	0.9411
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	10	13	7	11	11	3	150	6	13	324	0
Total Analysis Volume [veh/h]	19	39	52	29	44	44	12	598	24	53	1295	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	34			32			34			29		
Bicycle Volume [bicycles/h]	6			3			6			6		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	25	0	0	25	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	85	0	0	85	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	9	0	0	9	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	17	17	94	94	94	94
g / C, Green / Cycle	0.14	0.14	0.78	0.78	0.78	0.78
(v / s)_i Volume / Saturation Flow Rate	0.06	0.09	0.17	0.17	0.39	0.38
s, saturation flow rate [veh/h]	1627	1339	1778	1729	1771	1729
c, Capacity [veh/h]	232	228	1420	1350	1415	1350
d1, Uniform Delay [s]	46.69	48.12	3.45	3.49	4.51	4.67
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.40	0.66	0.35	0.38	1.19	1.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

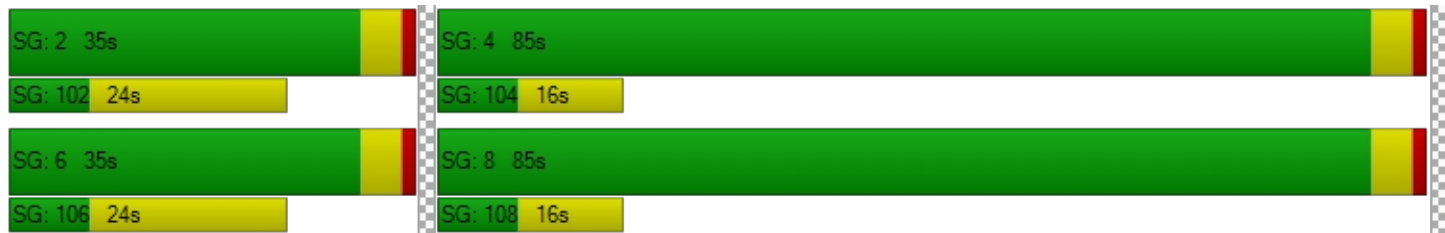
X, volume / capacity	0.39	0.51	0.22	0.22	0.48	0.49
d, Delay for Lane Group [s/veh]	47.09	48.78	3.80	3.87	5.70	5.95
Lane Group LOS	D	D	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.48	3.35	1.78	1.74	5.21	5.23
50th-Percentile Queue Length [ft]	61.99	83.63	44.55	43.59	130.25	130.72
95th-Percentile Queue Length [veh]	4.46	6.02	3.21	3.14	8.95	8.98
95th-Percentile Queue Length [ft]	111.58	150.53	80.19	78.47	223.84	224.48

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	47.09	47.09	48.78	48.78	48.78	3.80	3.83	0.00	5.70	5.83	5.95
Movement LOS		D	D	D	D	D	A	A		A	A	A
d_A, Approach Delay [s/veh]		47.09		48.78			3.83			5.82		
Approach LOS		D		D			A			A		
d_I, Intersection Delay [s/veh]	9.32											
Intersection LOS	A											
Intersection V/C	0.474											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 128: CLOVERFIELD BOULEVARD/PICO BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	32.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

**Intersection Setup**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T			T T			T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Pico Blvd			Pico Blvd			Cloverfield Blvd			Cloverfield Blvd		
Base Volume Input [veh/h]	292	910	30	0	650	88	30	157	10	325	341	574
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	292	910	30	0	650	88	30	157	10	325	341	574
Peak Hour Factor	0.9699	0.9699	0.9699	0.9295	0.9295	0.9295	0.8468	0.8468	0.8468	0.9465	0.9465	0.9465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	75	235	8	0	175	24	9	46	3	86	90	152
Total Analysis Volume [veh/h]	301	938	31	0	699	95	35	185	12	343	360	606
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	19			33			39			50		
Bicycle Volume [bicycles/h]	9			6			13			8		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	90.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	5	2	0	1	6	0	0	8	0	7	4	4
Auxiliary Signal Groups												4,5
Lead / Lag	Lag	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	0	7	0	5	7	7
Maximum Green [s]	15	30	0	15	30	0	0	30	0	15	30	30
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	3.6
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0
Split [s]	36	58	0	13	35	0	0	32	0	17	49	49
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	7
Pedestrian Clearance [s]	0	18	0	0	23	0	0	20	0	0	24	24
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6
Minimum Recall	Yes	Yes		No	No			No		No	No	No
Maximum Recall	No	No		No	No			No		No	No	No
Pedestrian Recall	No	No		No	No			No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	0.00	2.60	0.00
g_i, Effective Green Time [s]	34	63	63	0	29	29	26	26	26	43	43	82
g / C, Green / Cycle	0.28	0.52	0.52	0.00	0.24	0.24	0.22	0.22	0.22	0.36	0.36	0.68
(v / s)_j Volume / Saturation Flow Rate	0.09	0.26	0.26	0.00	0.21	0.22	0.03	0.10	0.01	0.24	0.19	0.38
s, saturation flow rate [veh/h]	3514	1900	1869	1810	1900	1780	1029	1900	1505	1422	1900	1578
c, Capacity [veh/h]	989	994	978	0	460	431	114	417	331	501	687	1075
d1, Uniform Delay [s]	33.87	18.33	18.37	0.00	43.79	44.09	55.71	40.47	36.82	32.37	30.18	9.90
k, delay calibration	0.50	0.50	0.50	0.04	0.29	0.31	0.04	0.04	0.04	0.15	0.04	0.48
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.79	1.72	1.77	0.00	13.52	17.22	0.56	0.28	0.02	2.25	0.23	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

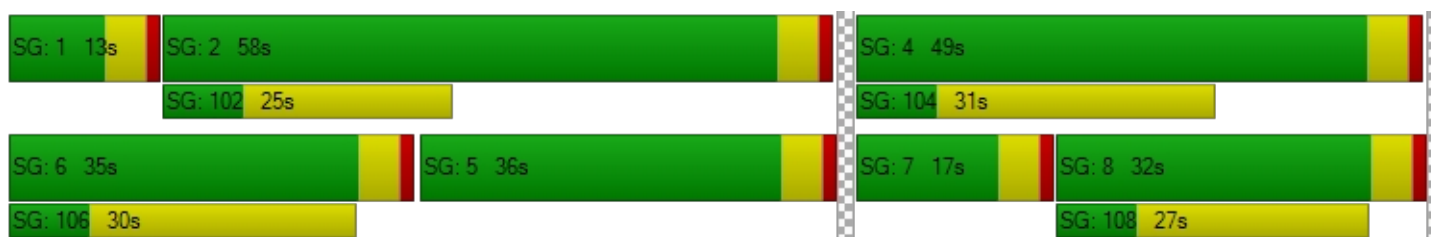
X, volume / capacity	0.30	0.49	0.49	0.00	0.88	0.90	0.31	0.44	0.04	0.69	0.52	0.56
d, Delay for Lane Group [s/veh]	34.67	20.05	20.14	0.00	57.31	61.31	56.27	40.74	36.84	34.62	30.41	11.96
Lane Group LOS	C	C	C	A	E	E	E	D	D	C	C	B
Critical Lane Group	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	3.54	8.85	8.79	0.00	13.13	13.08	1.05	4.72	0.28	8.10	8.21	8.23
50th-Percentile Queue Length [ft]	88.53	221.20	219.64	0.00	328.28	327.07	26.21	118.05	6.96	202.39	205.28	205.81
95th-Percentile Queue Length [veh]	6.37	13.73	13.65	0.00	19.07	19.01	1.89	8.29	0.50	12.76	12.91	12.94
95th-Percentile Queue Length [ft]	159.36	343.15	341.16	0.00	476.85	475.37	47.17	207.15	12.52	319.05	322.77	323.45

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	34.67	20.09	20.14	0.00	58.99	61.31	56.27	40.74	36.84	34.62	30.41	11.96
Movement LOS	C	C	C	A	E	E	E	D	D	C	C	B
d_A, Approach Delay [s/veh]	23.55			59.27			42.88			22.97		
Approach LOS	C			E			D			C		
d_I, Intersection Delay [s/veh]	32.45											
Intersection LOS	C											
Intersection V/C	0.696											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 129: CLOVERFIELD BOULEVARD/OCEAN PARK BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

**Intersection Setup**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	40.00		40.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Ocean Park Blvd		Ocean Park Blvd		Cloverfield Blvd	
Base Volume Input [veh/h]	36	550	570	80	170	121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	550	570	80	170	121
Peak Hour Factor	0.9278	0.9278	0.9297	0.9297	0.9129	0.9129
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	148	153	22	47	33
Total Analysis Volume [veh/h]	39	593	613	86	186	133
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	11		0		20	
Bicycle Volume [bicycles/h]	0		0		13	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	10.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	ProtectedPermissi	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	7	7	0	7	0
Maximum Green [s]	15	30	30	0	25	0
Amber [s]	3.6	3.6	3.6	0.0	3.6	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	65	53	0	35	0
Vehicle Extension [s]	2.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	7	0
Pedestrian Clearance [s]	0	0	12	0	17	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	0.0	2.6	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	78	78	70	70	12	12
g / C, Green / Cycle	0.78	0.78	0.71	0.71	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.32	0.05	0.10	0.09
s, saturation flow rate [veh/h]	897	1900	1900	1592	1810	1517
c, Capacity [veh/h]	690	1490	1339	1122	224	188
d1, Uniform Delay [s]	3.52	3.38	6.43	4.60	42.78	42.07
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.16	0.80	1.13	0.13	3.06	1.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.06	0.40	0.46	0.08	0.83	0.71
d, Delay for Lane Group [s/veh]	3.68	4.17	7.56	4.74	45.84	43.92
Lane Group LOS	A	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.14	2.62	4.81	0.48	4.59	3.19
50th-Percentile Queue Length [ft]	3.39	65.38	120.30	12.07	114.76	79.76
95th-Percentile Queue Length [veh]	0.24	4.71	8.41	0.87	8.10	5.74
95th-Percentile Queue Length [ft]	6.10	117.68	210.24	21.72	202.60	143.57

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	3.68	4.17	7.56	4.74	45.84	43.92
Movement LOS	A	A	A	A	D	D
d_A, Approach Delay [s/veh]	4.14		7.21		45.04	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	13.35					
Intersection LOS	B					
Intersection V/C	0.431					

**Sequence**

Ring 1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 131: TWENTY-SIXTH STREET/SAN VICENTE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	39.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

**Intersection Setup**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	San Vicente Blvd			San Vicente Blvd			26th St			26th St		
Base Volume Input [veh/h]	90	717	74	146	784	280	126	340	161	220	260	120
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	90	717	74	146	784	280	126	340	161	220	260	120
Peak Hour Factor	0.9447	0.9447	0.9447	0.9476	0.9476	0.9476	0.9475	0.9475	0.9475	0.9539	0.9539	0.9539
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	190	20	39	207	74	33	90	42	58	68	31
Total Analysis Volume [veh/h]	95	759	78	154	827	295	133	359	170	231	273	126
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5			10			50			14		
Bicycle Volume [bicycles/h]	2			2			18			15		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	20	40	0	20	40	0	0	30	0	0	30	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall	No	Yes		No	Yes			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	8	45	45	12	50	50	25	25	25	19	19	19
g / C, Green / Cycle	0.07	0.38	0.38	0.10	0.41	0.41	0.21	0.21	0.21	0.16	0.16	0.16
(v / s)_j Volume / Saturation Flow Rate	0.05	0.21	0.05	0.09	0.23	0.19	0.07	0.19	0.11	0.13	0.14	0.08
s, saturation flow rate [veh/h]	1810	3618	1531	1810	3618	1553	1810	1900	1542	1810	1900	1548
c, Capacity [veh/h]	120	1367	579	182	1491	640	373	392	318	293	307	250
d1, Uniform Delay [s]	55.21	29.41	24.48	53.06	26.90	25.62	40.81	46.62	42.50	48.36	49.26	45.92
k, delay calibration	0.04	0.50	0.50	0.04	0.50	0.50	0.04	0.20	0.04	0.04	0.07	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.30	1.63	0.48	4.07	1.49	2.38	0.21	14.16	0.52	1.81	5.62	0.58
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

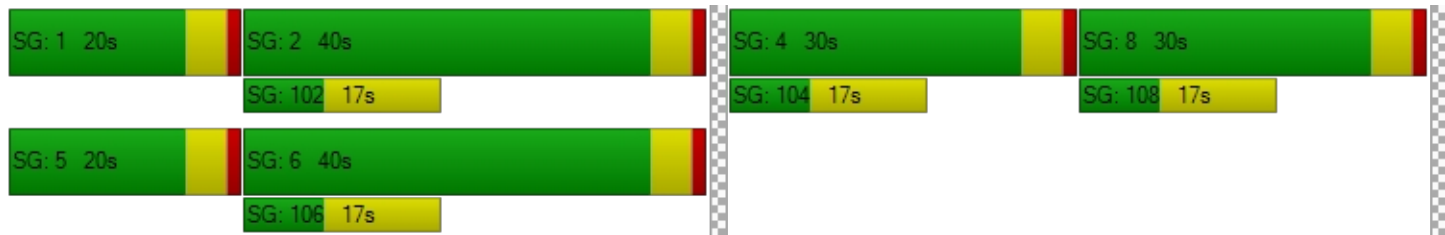
X, volume / capacity	0.79	0.56	0.13	0.84	0.55	0.46	0.36	0.92	0.53	0.79	0.89	0.50
d, Delay for Lane Group [s/veh]	59.51	31.04	24.97	57.13	28.39	28.00	41.03	60.78	43.02	50.17	54.88	46.51
Lane Group LOS	E	C	C	E	C	C	D	E	D	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	2.95	8.77	1.53	5.00	9.98	6.99	3.37	11.88	4.51	6.73	8.40	3.45
50th-Percentile Queue Length [ft]	73.84	219.22	38.14	124.88	249.47	174.82	84.37	297.02	112.71	168.17	210.02	86.21
95th-Percentile Queue Length [veh]	5.32	13.63	2.75	8.66	15.16	11.33	6.07	17.53	7.99	10.98	13.15	6.21
95th-Percentile Queue Length [ft]	132.92	340.63	68.65	216.51	378.99	283.24	151.87	438.34	199.76	274.51	328.85	155.18

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	59.51	31.04	24.97	57.13	28.39	28.00	41.03	60.78	43.02	50.17	54.88	46.51
Movement LOS	E	C	C	E	C	C	D	E	D	D	D	D
d_A, Approach Delay [s/veh]	33.43			31.77			52.25			51.48		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	39.63											
Intersection LOS	D											
Intersection V/C	0.628											

**Sequence**

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 132: TWENTY-SIXTH STREET/MONTANA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	17.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

**Intersection Setup**

Name	Montana Ave			Montana Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌			⇌			⇌⇌			⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	25.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Montana Ave			Montana Ave			26th St			26th St		
Base Volume Input [veh/h]	100	460	75	40	430	100	77	478	90	60	360	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	460	75	40	430	100	77	478	90	60	360	80
Peak Hour Factor	0.8844	0.8844	0.8844	0.9057	0.9057	0.9057	0.9313	0.9313	0.9313	0.8911	0.8911	0.8911
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	130	21	11	119	28	21	128	24	17	101	22
Total Analysis Volume [veh/h]	113	520	85	44	475	110	83	513	97	67	404	90
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	4			4			9			13		
Bicycle Volume [bicycles/h]	1			2			2			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	23	23	23	23	23	23
g / C, Green / Cycle	0.47	0.47	0.47	0.47	0.38	0.38	0.38	0.38	0.38	0.38
(v / s)_j Volume / Saturation Flow Rate	0.13	0.33	0.05	0.32	0.08	0.27	0.06	0.07	0.21	0.06
s, saturation flow rate [veh/h]	843	1845	828	1831	995	1900	1571	901	1900	1562
c, Capacity [veh/h]	283	867	272	860	291	716	592	218	716	589
d1, Uniform Delay [s]	22.58	12.56	21.15	12.40	22.47	15.96	12.42	25.75	14.80	12.36
k, delay calibration	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.18	4.65	1.28	4.32	0.20	0.51	0.05	0.29	0.26	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

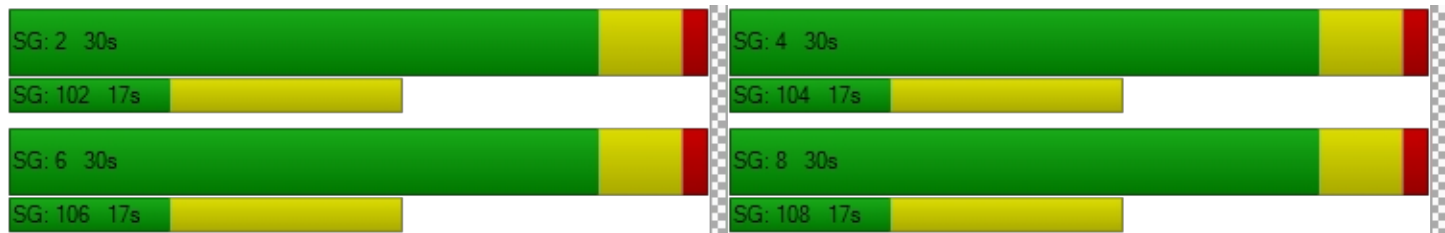
X, volume / capacity	0.40	0.70	0.16	0.68	0.29	0.72	0.16	0.31	0.56	0.15
d, Delay for Lane Group [s/veh]	26.77	17.20	22.43	16.73	22.67	16.47	12.46	26.05	15.06	12.41
Lane Group LOS	C	B	C	B	C	B	B	C	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.74	6.69	0.60	6.16	0.98	5.21	0.76	0.87	3.78	0.70
50th-Percentile Queue Length [ft]	43.47	167.31	14.89	154.06	24.60	130.18	18.98	21.69	94.51	17.53
95th-Percentile Queue Length [veh]	3.13	10.93	1.07	10.23	1.77	8.95	1.37	1.56	6.80	1.26
95th-Percentile Queue Length [ft]	78.24	273.37	26.81	255.83	44.28	223.74	34.16	39.04	170.11	31.55

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	26.77	17.20	17.20	22.43	16.73	16.73	22.67	16.47	12.46	26.05	15.06	12.41
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	18.71			17.13			16.65			15.94		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.18											
Intersection LOS	B											
Intersection V/C	0.598											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 133: TWENTY-SIXTH STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.719

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			26th St			26th St		
Base Volume Input [veh/h]	67	1149	110	60	1171	141	80	438	157	130	340	65
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1149	110	60	1171	141	80	438	157	130	340	65
Peak Hour Factor	0.9242	0.9242	0.9242	0.9024	0.9024	0.9024	0.9636	0.9636	0.9636	0.9280	0.9280	0.9280
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	311	30	17	324	39	21	114	41	35	92	18
Total Analysis Volume [veh/h]	72	1243	119	66	1298	156	83	455	163	140	366	70
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	41			39			77			74		
Bicycle Volume [bicycles/h]	9			6			12			11		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	106.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	2	1	6	0	3	8	8	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	7	7	7	0	7	7	7	7	7	0
Maximum Green [s]	15	30	30	15	30	0	15	30	30	15	30	0
Amber [s]	3.6	3.6	3.6	3.6	3.6	0.0	3.6	3.6	3.6	3.6	3.6	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	14	47	47	14	47	0	14	45	45	14	45	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	14	14	0	14	0	0	21	21	0	21	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	0.0	2.6	2.6	2.6	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	67	56	56	67	56	56	44	31	31	44	32	32
g / C, Green / Cycle	0.56	0.47	0.47	0.56	0.47	0.47	0.36	0.26	0.26	0.36	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.13	0.36	0.37	0.11	0.39	0.40	0.07	0.24	0.11	0.12	0.19	0.05
s, saturation flow rate [veh/h]	565	1900	1817	591	1900	1780	1197	1900	1507	1167	1900	1510
c, Capacity [veh/h]	272	892	853	293	890	834	344	484	384	291	512	407
d1, Uniform Delay [s]	21.90	26.47	26.78	19.23	27.66	28.38	27.51	43.77	37.33	30.23	39.65	33.56
k, delay calibration	0.50	0.50	0.50	0.28	0.50	0.50	0.04	0.18	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.37	6.44	7.30	1.00	8.72	11.29	0.13	13.82	0.28	0.46	0.79	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.27	0.77	0.79	0.23	0.83	0.86	0.24	0.94	0.42	0.48	0.72	0.17
d, Delay for Lane Group [s/veh]	24.27	32.91	34.08	20.22	36.38	39.67	27.64	57.59	37.60	30.69	40.43	33.64
Lane Group LOS	C	C	C	C	D	D	C	E	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.04	17.34	17.28	0.87	19.71	20.16	1.59	14.85	4.00	2.79	9.73	1.57
50th-Percentile Queue Length [ft]	26.11	433.43	432.08	21.79	492.66	504.06	39.71	371.18	99.93	69.64	243.31	39.15
95th-Percentile Queue Length [veh]	1.88	24.17	24.10	1.57	26.99	27.53	2.86	21.17	7.20	5.01	14.85	2.82
95th-Percentile Queue Length [ft]	47.00	604.15	602.53	39.22	674.66	688.16	71.48	529.17	179.88	125.35	371.22	70.47

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.27	33.43	34.08	20.22	37.81	39.67	27.64	57.59	37.60	30.69	40.43	33.64
Movement LOS	C	C	C	C	D	D	C	E	D	C	D	C
d_A, Approach Delay [s/veh]	33.03			37.23			49.40			37.24		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	37.82											
Intersection LOS	D											
Intersection V/C	0.719											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 134: TWENTY-SIXTH STREET/ARIZONA AVENUE**

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			26th St			26th St		
Base Volume Input [veh/h]	62	214	30	20	170	20	50	593	60	20	499	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	214	30	20	170	20	50	593	60	20	499	51
Peak Hour Factor	0.8933	0.8933	0.8933	0.7813	0.7813	0.7813	0.9906	0.9906	0.9906	0.8948	0.8948	0.8948
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	60	8	6	54	6	13	150	15	6	139	14
Total Analysis Volume [veh/h]	69	240	34	26	218	26	50	599	61	22	558	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	20			20			15			14		
Bicycle Volume [bicycles/h]	4			4			13			9		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	69.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	25	25	25	25	25	25	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	40	40	40	40	40	40	80	80	80	80	80	80
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	15	15	15	15	15	15	15	15	15	15	15	15
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	31	31	80	80	80	80
g / C, Green / Cycle	0.26	0.26	0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.24	0.17	0.06	0.35	0.03	0.33
s, saturation flow rate [veh/h]	1439	1609	820	1861	787	1861
c, Capacity [veh/h]	406	447	456	1239	425	1240
d1, Uniform Delay [s]	43.79	38.79	17.11	10.37	17.76	9.99
k, delay calibration	0.31	0.13	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	12.46	1.60	0.49	1.64	0.23	1.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

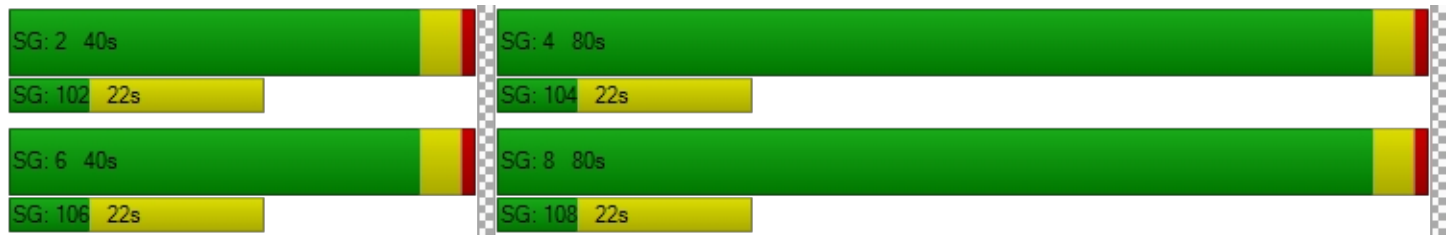
X, volume / capacity	0.84	0.60	0.11	0.53	0.05	0.50
d, Delay for Lane Group [s/veh]	56.25	40.39	17.60	12.01	17.99	11.42
Lane Group LOS	E	D	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	11.26	7.07	0.81	8.75	0.36	7.84
50th-Percentile Queue Length [ft]	281.51	176.78	20.34	218.80	9.03	196.04
95th-Percentile Queue Length [veh]	16.76	11.43	1.46	13.60	0.65	12.43
95th-Percentile Queue Length [ft]	419.09	285.80	36.61	340.09	16.25	310.85

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	56.25	56.25	56.25	40.39	40.39	40.39	17.60	12.01	12.01	17.99	11.42	11.42
Movement LOS	E	E	E	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	56.25			40.39			12.40			11.64		
Approach LOS	E			D			B			B		
d_I, Intersection Delay [s/veh]	23.68											
Intersection LOS	C											
Intersection V/C	0.593											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 135: TWENTY-SIXTH STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	37.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.687

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			26th St			26th St		
Base Volume Input [veh/h]	108	965	60	90	930	80	80	495	70	190	399	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	965	60	90	930	80	80	495	70	190	399	40
Peak Hour Factor	0.9043	0.9043	0.9043	0.9484	0.9484	0.9484	0.9532	0.9532	0.9532	0.8991	0.8991	0.8991
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	267	17	24	245	21	21	130	18	53	111	11
Total Analysis Volume [veh/h]	119	1067	66	95	981	84	84	519	73	211	444	44
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	63			37			40			55		
Bicycle Volume [bicycles/h]	10			9			7			4		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	113.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	7	0	5	7	0	5	7	0	5	7	0
Maximum Green [s]	15	30	0	15	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	49	0	14	49	0	14	41	0	16	43	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	18	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	61	51	51	61	50	50	50	34	34	50	40	40
g / C, Green / Cycle	0.50	0.42	0.42	0.50	0.42	0.42	0.42	0.29	0.29	0.42	0.34	0.34
(v / s)_j Volume / Saturation Flow Rate	0.16	0.30	0.30	0.14	0.28	0.29	0.08	0.27	0.05	0.18	0.23	0.03
s, saturation flow rate [veh/h]	722	1900	1850	672	1900	1828	1092	1900	1526	1148	1900	1503
c, Capacity [veh/h]	326	805	784	301	789	760	349	544	437	329	640	506
d1, Uniform Delay [s]	20.10	28.49	28.58	20.28	28.61	28.75	24.05	42.00	32.06	28.18	34.40	27.15
k, delay calibration	0.50	0.50	0.50	0.47	0.50	0.50	0.06	0.35	0.04	0.04	0.15	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.13	5.27	5.55	2.55	4.77	5.13	0.20	22.73	0.07	0.78	1.89	0.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

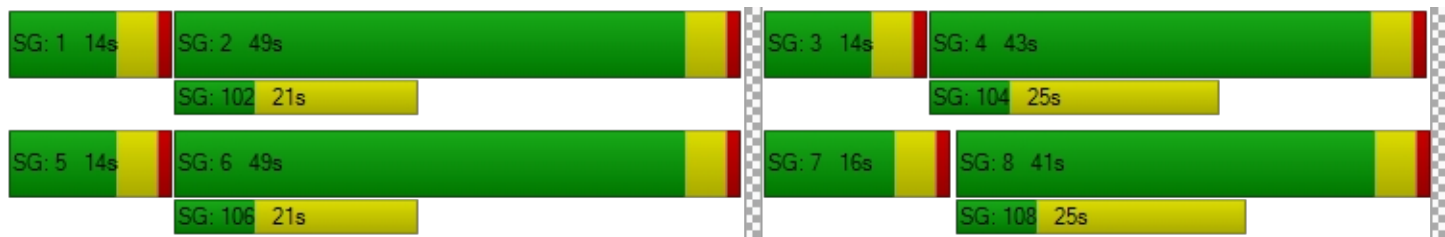
X, volume / capacity	0.36	0.71	0.72	0.32	0.68	0.69	0.24	0.95	0.17	0.64	0.69	0.09
d, Delay for Lane Group [s/veh]	23.23	33.75	34.13	22.83	33.38	33.87	24.26	64.73	32.13	28.96	36.29	27.18
Lane Group LOS	C	C	C	C	C	C	C	E	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.02	14.52	14.35	1.58	13.55	13.31	1.45	18.19	1.59	3.96	11.33	0.86
50th-Percentile Queue Length [ft]	50.45	363.11	358.76	39.46	338.74	332.81	36.32	454.67	39.79	98.92	283.14	21.59
95th-Percentile Queue Length [veh]	3.63	20.77	20.56	2.84	19.59	19.30	2.61	25.18	2.87	7.12	16.84	1.55
95th-Percentile Queue Length [ft]	90.81	519.37	514.07	71.02	489.67	482.40	65.37	629.52	71.63	178.05	421.11	38.86

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	23.23	33.93	34.13	22.83	33.60	33.87	24.26	64.73	32.13	28.96	36.29	27.18
Movement LOS	C	C	C	C	C	C	C	E	C	C	D	C
d_A, Approach Delay [s/veh]	32.93			32.74			56.18			33.50		
Approach LOS	C			C			E			C		
d_I, Intersection Delay [s/veh]	37.13											
Intersection LOS	D											
Intersection V/C	0.687											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 136: TWENTY-SIXTH STREET/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	19.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.671

**Intersection Setup**

Name	Broadway			Broadway			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Broadway			26th St			26th St		
Base Volume Input [veh/h]	85	526	140	20	240	50	50	520	100	0	485	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	526	140	20	240	50	50	520	100	0	485	54
Peak Hour Factor	0.9031	0.9031	0.9031	0.9191	0.9191	0.9191	0.9469	0.9469	0.9469	0.8571	0.8571	0.8571
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	146	39	5	65	14	13	137	26	0	141	16
Total Analysis Volume [veh/h]	94	582	155	22	261	54	53	549	106	0	566	63
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	52			34			61			20		
Bicycle Volume [bicycles/h]	5			5			33			34		



**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	40	0	0	40	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	32	32	32	32	32	32	29	29	29	29	29	29
g / C, Green / Cycle	0.45	0.45	0.45	0.45	0.45	0.45	0.41	0.41	0.41	0.41	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.09	0.34	0.11	0.03	0.15	0.04	0.07	0.32	0.08	0.00	0.33	0.05
s, saturation flow rate [veh/h]	1017	1710	1375	761	1710	1414	770	1710	1325	785	1710	1294
c, Capacity [veh/h]	430	776	624	206	776	642	183	709	549	194	709	536
d1, Uniform Delay [s]	17.73	15.81	11.76	26.90	12.31	10.85	30.19	17.67	13.04	0.00	17.93	12.61
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.12	0.04	0.04	0.14	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	6.56	0.95	1.04	1.17	0.26	0.32	2.12	0.06	0.00	2.75	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

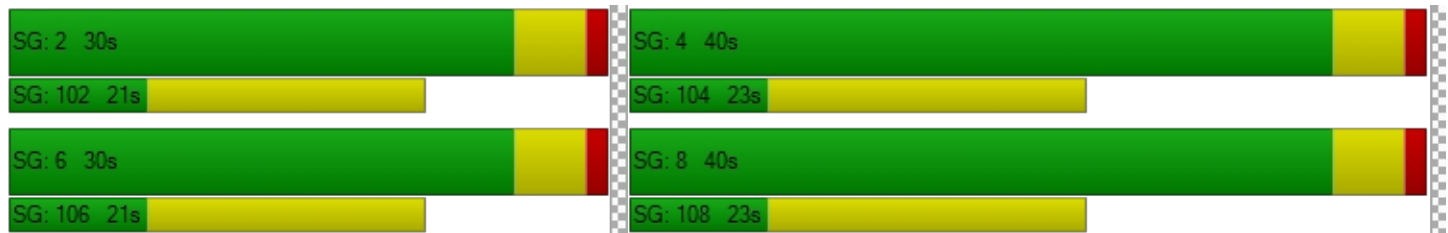
X, volume / capacity	0.22	0.75	0.25	0.11	0.34	0.08	0.29	0.77	0.19	0.00	0.80	0.12
d, Delay for Lane Group [s/veh]	18.90	22.37	12.71	27.94	13.48	11.10	30.51	19.79	13.10	0.00	20.69	12.65
Lane Group LOS	B	C	B	C	B	B	C	B	B	A	C	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	1.18	8.04	1.48	0.37	2.56	0.47	0.83	7.11	0.96	0.00	7.54	0.55
50th-Percentile Queue Length [ft]	29.57	200.96	36.90	9.24	64.12	11.69	20.77	177.64	24.06	0.00	188.50	13.83
95th-Percentile Queue Length [veh]	2.13	12.69	2.66	0.67	4.62	0.84	1.50	11.48	1.73	0.00	12.04	1.00
95th-Percentile Queue Length [ft]	53.23	317.20	66.42	16.63	115.41	21.03	37.39	286.94	43.31	0.00	301.08	24.89

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.90	22.37	12.71	27.94	13.48	11.10	30.51	19.79	13.10	0.00	20.69	12.65
Movement LOS	B	C	B	C	B	B	C	B	B	A	C	B
d_A, Approach Delay [s/veh]	20.18			14.04			19.59			19.88		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	19.11											
Intersection LOS	B											
Intersection V/C	0.671											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 137: TWENTY-SIXTH STREET/COLORADO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	33.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.647

**Intersection Setup**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Colorado Ave			Colorado Ave			26th St			26th St		
Base Volume Input [veh/h]	40	452	180	0	538	130	70	460	140	190	480	90
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	452	180	0	538	130	70	460	140	190	480	90
Peak Hour Factor	0.9064	0.9064	0.9064	0.9403	0.9403	0.9403	0.9185	0.9185	0.9185	0.8686	0.8686	0.8686
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	125	50	0	143	35	19	125	38	55	138	26
Total Analysis Volume [veh/h]	44	499	199	0	572	138	76	501	152	219	553	104
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	57			60			47			60		
Bicycle Volume [bicycles/h]	8			4			13			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	0	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	0	7	0	7	7	0	7	7	0
Maximum Green [s]	15	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	13	40	0	0	27	0	15	35	0	15	35	0
Vehicle Extension [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	18	0	0	14	0	0	16	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes			Yes		No	No		No	No	
Maximum Recall	No	No			No		No	No		No	No	
Pedestrian Recall	No	Yes			Yes		No	Yes		No	Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	5	40	40	31	31	31	6	26	26	10	30	30
g / C, Green / Cycle	0.05	0.45	0.45	0.34	0.34	0.34	0.07	0.28	0.28	0.12	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.02	0.26	0.13	0.00	0.19	0.20	0.04	0.26	0.10	0.12	0.18	0.18
s, saturation flow rate [veh/h]	1810	1900	1540	913	1900	1721	1810	1900	1481	1810	1900	1752
c, Capacity [veh/h]	96	848	687	188	650	589	121	541	422	209	634	585
d1, Uniform Delay [s]	41.43	18.74	15.87	0.00	24.16	24.37	40.95	31.30	25.69	39.85	24.34	24.48
k, delay calibration	0.04	0.50	0.50	0.50	0.50	0.50	0.04	0.24	0.04	0.15	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.27	2.99	1.06	0.00	3.51	4.19	1.98	14.19	0.19	46.55	0.26	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

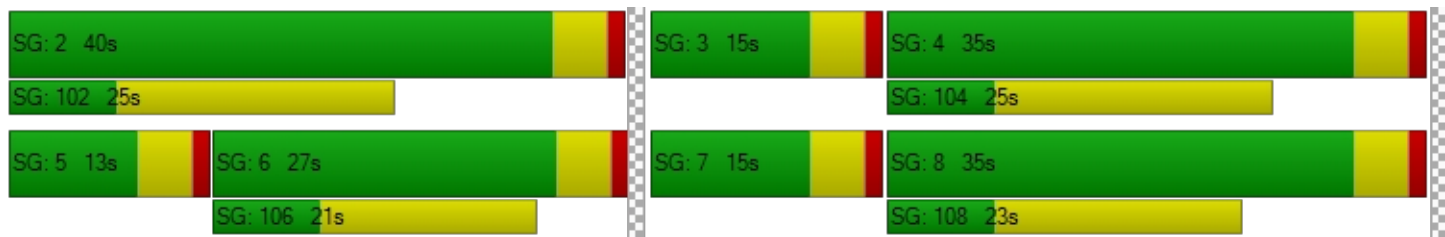
X, volume / capacity	0.46	0.59	0.29	0.00	0.56	0.58	0.63	0.93	0.36	1.05	0.53	0.55
d, Delay for Lane Group [s/veh]	42.70	21.73	16.94	0.00	27.66	28.56	42.93	45.49	25.88	86.40	24.60	24.77
Lane Group LOS	D	C	B	A	C	C	D	D	C	F	C	C
Critical Lane Group	No	Yes	No	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.97	8.12	2.71	0.00	6.78	6.51	1.69	12.35	2.57	7.21	5.61	5.35
50th-Percentile Queue Length [ft]	24.32	203.01	67.70	0.00	169.54	162.63	42.26	308.82	64.17	180.34	140.37	133.68
95th-Percentile Queue Length [veh]	1.75	12.79	4.87	0.00	11.05	10.69	3.04	18.12	4.62	11.83	9.50	9.14
95th-Percentile Queue Length [ft]	43.78	319.84	121.85	0.00	276.32	267.20	76.07	452.92	115.50	295.65	237.52	228.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.70	21.73	16.94	0.00	27.98	28.56	42.93	45.49	25.88	86.40	24.67	24.77
Movement LOS	D	C	B	A	C	C	D	D	C	F	C	C
d_A, Approach Delay [s/veh]	21.69			28.10			41.13			40.11		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	33.09											
Intersection LOS	C											
Intersection V/C	0.647											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 138: TWENTY-SIXTH STREET/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	42.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

**Intersection Setup**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Approach	Northbound			Southbound			Westbound			Northeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			45.00			0.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	26th St			26th St			Olympic Blvd			Olympic Blvd		
Base Volume Input [veh/h]	20	370	60	220	0	150	0	1112	90	210	939	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	370	60	220	0	150	0	1112	90	210	939	0
Peak Hour Factor	0.7623	0.7623	0.7623	0.9172	1.0000	0.9172	1.0000	0.9224	0.9224	0.8935	0.8935	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	121	20	60	0	41	0	301	24	59	263	0
Total Analysis Volume [veh/h]	26	485	79	240	0	164	0	1206	98	235	1051	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	45			54			173			0		
Bicycle Volume [bicycles/h]	32			6			28			0		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	40.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	3	8	0	7	0	4	0	6	0	5	2	0
Auxiliary Signal Groups						4,5						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	0	7	0	7	0	7	7	0
Maximum Green [s]	15	30	0	30	0	30	0	30	0	15	30	0
Amber [s]	3.6	3.6	0.0	3.6	0.0	3.6	0.0	3.6	0.0	3.6	3.6	0.0
All red [s]	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	35	0	22	0	39	0	42	0	21	63	0
Vehicle Extension [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	4.0	0.0	4.0	4.0	0.0
Walk [s]	0	5	0	7	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	25	0	10	0	0	0	20	0	0	18	0
Rest In Walk		No		No				No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	0.0	2.6	0.0	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	No		No		No		Yes		No	Yes	
Maximum Recall	No	No		No		No		No		No	No	
Pedestrian Recall	No	No		No		No		No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	R	C	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	4	29	29	10	57	45	45	16	66
g / C, Green / Cycle	0.03	0.25	0.25	0.09	0.47	0.38	0.38	0.14	0.55
(v / s)_j Volume / Saturation Flow Rate	0.01	0.15	0.17	0.07	0.06	0.34	0.36	0.13	0.29
s, saturation flow rate [veh/h]	1810	1900	1644	3514	2816	1900	1828	1810	3618
c, Capacity [veh/h]	63	466	403	303	1328	720	692	247	2003
d1, Uniform Delay [s]	56.75	40.31	41.11	53.78	17.79	35.25	36.00	51.42	16.85
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.38	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.64	0.50	0.86	1.78	0.02	17.12	22.57	38.64	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

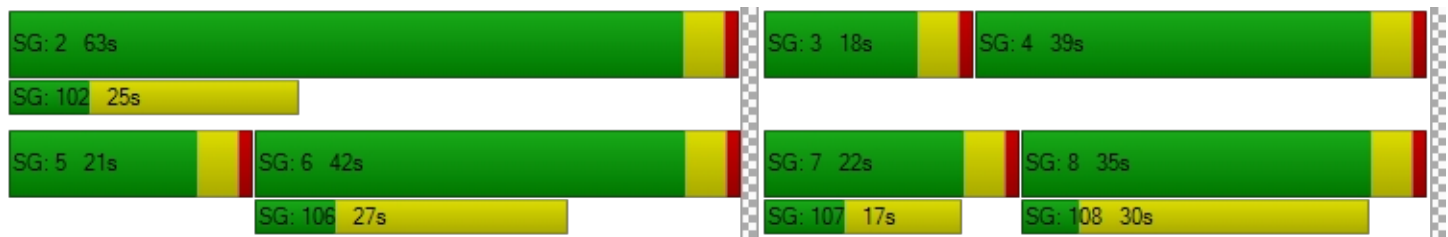
X, volume / capacity	0.42	0.62	0.69	0.79	0.12	0.91	0.94	0.95	0.52
d, Delay for Lane Group [s/veh]	58.39	40.81	41.97	55.57	17.81	52.37	58.56	90.06	17.83
Lane Group LOS	E	D	D	E	B	D	E	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.80	7.62	7.49	3.63	1.28	20.44	21.72	10.01	10.15
50th-Percentile Queue Length [ft]	20.04	190.51	187.15	90.72	32.10	511.03	542.97	250.22	253.82
95th-Percentile Queue Length [veh]	1.44	12.15	11.97	6.53	2.31	27.86	29.36	15.20	15.38
95th-Percentile Queue Length [ft]	36.07	303.69	299.33	163.30	57.79	696.40	734.04	379.94	384.46

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	58.39	41.28	41.97	55.57	0.00	17.81	0.00	55.22	58.56	90.06	17.83	0.00
Movement LOS	E	D	D	E		B		E	E	F	B	
d_A, Approach Delay [s/veh]	42.13			40.24			55.47			31.03		
Approach LOS	D			D			E			C		
d_I, Intersection Delay [s/veh]	42.79											
Intersection LOS	D											
Intersection V/C	0.723											

**Sequence**

Ring 1	2	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 139: YALE STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵↵			⊕			⊕		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	30	1165	90	60	1343	30	50	110	60	30	80	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1165	90	60	1343	30	50	110	60	30	80	20
Peak Hour Factor	0.9323	0.9323	0.9323	0.9690	0.9690	0.9690	0.8377	0.8377	0.8377	0.6932	0.6932	0.6932
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	312	24	15	346	8	15	33	18	11	29	7
Total Analysis Volume [veh/h]	32	1250	97	62	1386	31	60	131	72	43	115	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	21			27			6			64		
Bicycle Volume [bicycles/h]	2			1			1			2		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	8.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		No			No			No			No	
Maximum Recall		Yes			Yes			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	17	17
g / C, Green / Cycle	0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.08	0.36	0.36	0.15	0.37	0.38	0.16	0.12
s, saturation flow rate [veh/h]	385	1900	1844	412	1900	1878	1650	1610
c, Capacity [veh/h]	249	1266	1229	265	1266	1252	415	407
d1, Uniform Delay [s]	15.08	6.90	6.94	15.54	7.08	7.10	28.76	27.16
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	1.64	1.72	2.06	1.80	1.84	0.60	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

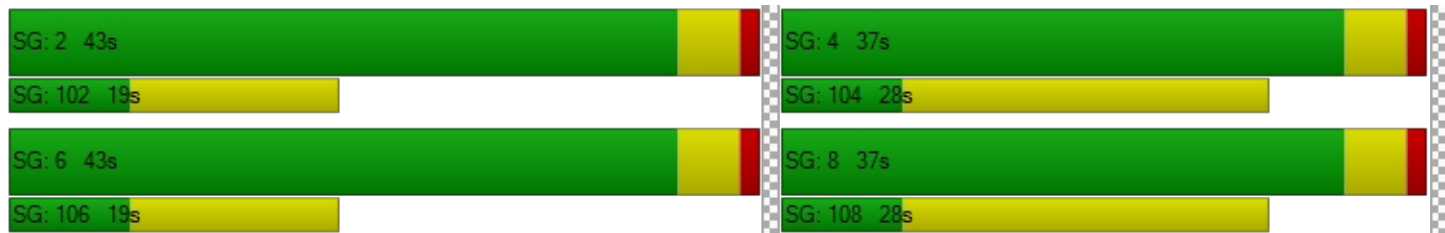
X, volume / capacity	0.13	0.54	0.54	0.23	0.56	0.56	0.63	0.46
d, Delay for Lane Group [s/veh]	16.15	8.54	8.66	17.61	8.88	8.95	29.36	27.47
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	No	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.42	5.13	5.07	0.86	5.50	5.50	4.50	3.00
50th-Percentile Queue Length [ft]	10.52	128.17	126.63	21.41	137.59	137.53	112.44	74.98
95th-Percentile Queue Length [veh]	0.76	8.84	8.76	1.54	9.35	9.35	7.98	5.40
95th-Percentile Queue Length [ft]	18.94	221.01	218.90	38.53	233.77	233.70	199.38	134.97

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	16.15	8.59	8.66	17.61	8.91	8.95	29.36	29.36	29.36	27.47	27.47	27.47
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.77			9.28			29.36			27.47		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.69											
Intersection LOS	B											
Intersection V/C	0.536											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 140: YALE STREET/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.485

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Yale St			Yale St		
Base Volume Input [veh/h]	40	1125	30	10	1090	20	30	140	60	20	160	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	1125	30	10	1090	20	30	140	60	20	160	10
Peak Hour Factor	0.9484	0.9484	0.9484	0.9635	0.9635	0.9635	0.8246	0.8246	0.8246	0.9073	0.9073	0.9073
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	297	8	3	283	5	9	42	18	6	44	3
Total Analysis Volume [veh/h]	42	1186	32	10	1131	21	36	170	73	22	176	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	28			31			31			45		
Bicycle Volume [bicycles/h]	4			2			11			4		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Maximum Green [s]	0	30	0	0	30	0	0	25	0	0	25	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	42	0	0	38	0	0	38	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	14	0	0	14	0	0	20	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	53	53	53	53	53	53	18	18
g / C, Green / Cycle	0.66	0.66	0.66	0.66	0.66	0.66	0.22	0.22
(v / s)_j Volume / Saturation Flow Rate	0.08	0.32	0.32	0.02	0.30	0.30	0.16	0.12
s, saturation flow rate [veh/h]	495	1900	1877	465	1900	1883	1725	1788
c, Capacity [veh/h]	326	1260	1244	306	1260	1249	433	446
d1, Uniform Delay [s]	11.90	6.68	6.69	11.70	6.51	6.51	28.66	27.19
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	1.34	1.37	0.20	1.20	1.22	0.60	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.13	0.49	0.49	0.03	0.46	0.46	0.64	0.47
d, Delay for Lane Group [s/veh]	12.72	8.02	8.06	11.90	7.71	7.74	29.26	27.47
Lane Group LOS	B	A	A	B	A	A	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.47	4.62	4.59	0.11	4.24	4.22	4.75	3.36
50th-Percentile Queue Length [ft]	11.84	115.38	114.77	2.72	105.96	105.54	118.84	84.09
95th-Percentile Queue Length [veh]	0.85	8.14	8.10	0.20	7.61	7.59	8.33	6.05
95th-Percentile Queue Length [ft]	21.31	203.46	202.62	4.90	190.37	189.77	208.23	151.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	12.72	8.04	8.06	11.90	7.72	7.74	29.26	29.26	29.26	27.47	27.47	27.47
Movement LOS	B	A	A	B	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.19			7.76			29.26			27.47		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	11.42											
Intersection LOS	B											
Intersection V/C	0.485											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 146: BERKELEY STREET/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↱			↵↱			↵↱			↵↱		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Berkeley St			Berkeley St		
Base Volume Input [veh/h]	50	1277	10	30	1343	90	20	90	30	100	110	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	1277	10	30	1343	90	20	90	30	100	110	50
Peak Hour Factor	0.8469	0.8469	0.8469	0.9809	0.9809	0.9809	0.9239	0.9239	0.9239	0.8717	0.8717	0.8717
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	377	3	8	342	23	5	24	8	29	32	14
Total Analysis Volume [veh/h]	59	1508	12	31	1369	92	22	97	32	115	126	57
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			38			45			25		
Bicycle Volume [bicycles/h]	0			1			2			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	53.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	2	2	2	6	6	6	8	8	8	4	4	4
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	7	7	7	7	7	7	7	7	7	7	7	7
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	43	43	43	43	43	43	37	37	37	37	37	37
Vehicle Extension [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk [s]	7	7	7	7	7	7	7	7	7	7	7	7
Pedestrian Clearance [s]	12	12	12	12	12	12	21	21	21	21	21	21
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	49	49	49	49	49	49	21	21	21	21
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.62	0.27	0.27	0.27	0.27
(v / s)_j Volume / Saturation Flow Rate	0.16	0.40	0.40	0.09	0.39	0.39	0.10	0.02	0.19	0.04
s, saturation flow rate [veh/h]	369	1900	1893	349	1900	1847	1147	1525	1300	1564
c, Capacity [veh/h]	221	1175	1171	211	1175	1142	359	407	413	417
d1, Uniform Delay [s]	19.75	9.72	9.73	18.73	9.52	9.59	23.36	21.96	26.39	22.31
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.93	2.77	2.79	1.46	2.54	2.69	0.20	0.03	0.49	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

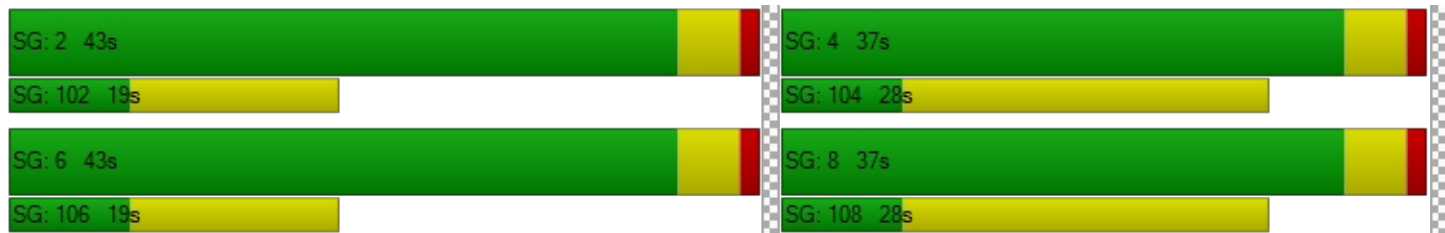
X, volume / capacity	0.27	0.65	0.65	0.15	0.63	0.63	0.33	0.08	0.58	0.14
d, Delay for Lane Group [s/veh]	22.68	12.49	12.52	20.19	12.05	12.29	23.56	21.99	26.88	22.37
Lane Group LOS	C	B	B	C	B	B	C	C	C	C
Critical Lane Group	No	No	Yes	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.97	7.73	7.73	0.47	7.30	7.27	1.69	0.43	3.95	0.79
50th-Percentile Queue Length [ft]	24.19	193.26	193.28	11.85	182.45	181.84	42.30	10.85	98.81	19.64
95th-Percentile Queue Length [veh]	1.74	12.29	12.29	0.85	11.73	11.70	3.05	0.78	7.11	1.41
95th-Percentile Queue Length [ft]	43.54	307.25	307.28	21.33	293.21	292.42	76.14	19.53	177.87	35.35

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.68	12.51	12.52	20.19	12.16	12.29	23.56	23.56	21.99	26.88	26.88	22.37
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.89			12.34			23.23			26.02		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.21											
Intersection LOS	B											
Intersection V/C	0.586											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 150: CENTINELA AVENUE (EAST)/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	12.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

**Intersection Setup**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Approach	Northeastbound		Southwestbound		Northwestbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

**Volumes**

Name	Wilshire Blvd		Wilshire Blvd		Centinela Ave   S Centinela Ave	
Base Volume Input [veh/h]	1457	100	80	1373	240	100
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1457	100	80	1373	240	100
Peak Hour Factor	0.8415	0.8415	0.8988	0.8988	0.9066	0.9066
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	433	30	22	382	66	28
Total Analysis Volume [veh/h]	1731	119	89	1528	265	110
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27		0		40	
Bicycle Volume [bicycles/h]	3		0		2	



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	88.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	6	0	0	2	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	10	0	0	10	9	0
Maximum Green [s]	30	0	0	30	30	0
Amber [s]	3.9	0.0	0.0	3.9	3.2	0.0
All red [s]	0.6	0.0	0.0	0.6	1.5	0.0
Split [s]	56	0	0	56	34	0
Vehicle Extension [s]	3.0	0.0	0.0	3.0	3.0	0.0
Walk [s]	7	0	0	0	7	0
Pedestrian Clearance [s]	8	0	0	0	16	0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	0.0	0.0	2.6	2.6	0.0
Minimum Recall	Yes			Yes	No	
Maximum Recall	No			No	No	
Pedestrian Recall	No			No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	L	C	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	65	65	65	65	16	16
g / C, Green / Cycle	0.72	0.72	0.72	0.72	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.50	0.51	0.36	0.43	0.15	0.07
s, saturation flow rate [veh/h]	1863	1808	248	3547	1728	1560
c, Capacity [veh/h]	1337	1297	177	2546	311	281
d1, Uniform Delay [s]	7.11	7.33	25.97	6.29	35.69	32.50
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.96	3.36	9.82	1.06	6.58	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

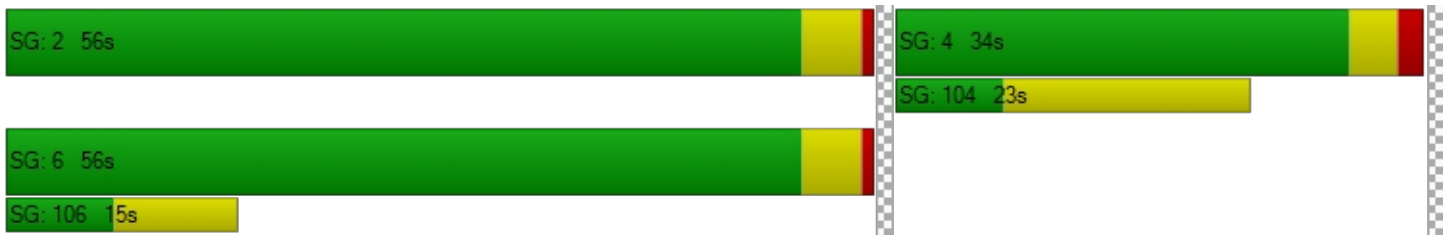
X, volume / capacity	0.69	0.71	0.50	0.60	0.85	0.39
d, Delay for Lane Group [s/veh]	10.07	10.69	35.79	7.34	42.27	33.40
Lane Group LOS	B	B	D	A	D	C
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.35	8.68	2.19	5.97	6.00	2.12
50th-Percentile Queue Length [ft]	208.64	217.03	54.82	149.27	150.12	53.12
95th-Percentile Queue Length [veh]	13.08	13.51	3.95	9.98	10.02	3.82
95th-Percentile Queue Length [ft]	327.08	337.83	98.68	249.46	250.58	95.61

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.36	10.69	35.79	7.34	42.27	33.40
Movement LOS	B	B	D	A	D	C
d_A, Approach Delay [s/veh]	10.38		8.91		39.67	
Approach LOS	B		A		D	
d_I, Intersection Delay [s/veh]	12.62					
Intersection LOS	B					
Intersection V/C	0.665					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 151: CENTINELA AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.749

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Ce Av			Ce Av		
Base Volume Input [veh/h]	20	1096	107	40	1068	40	102	400	80	40	270	50
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	1096	107	40	1068	40	102	400	80	40	270	50
Peak Hour Factor	0.8979	0.8979	0.8979	0.9857	0.9857	0.9857	0.9618	0.9618	0.9618	0.8465	0.8465	0.8465
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	305	30	10	271	10	27	104	21	12	80	15
Total Analysis Volume [veh/h]	22	1221	119	41	1083	41	106	416	83	47	319	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	22			20			25			27		
Bicycle Volume [bicycles/h]	3			7			10			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	12.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	5	0	0	5	0
Maximum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.2	0.0	0.0	3.2	0.0
All red [s]	0.0	0.8	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	1.8	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	26	26	26	26	25	25
g / C, Green / Cycle	0.43	0.43	0.43	0.43	0.43	0.43	0.41	0.41
(v / s)_j Volume / Saturation Flow Rate	0.04	0.36	0.36	0.10	0.30	0.30	0.39	0.27
s, saturation flow rate [veh/h]	509	1900	1822	414	1900	1866	1569	1576
c, Capacity [veh/h]	203	823	789	155	823	809	719	718
d1, Uniform Delay [s]	21.90	14.94	15.08	27.77	13.68	13.71	16.63	13.41
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.37	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.07	9.19	10.30	4.11	4.64	4.80	8.82	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

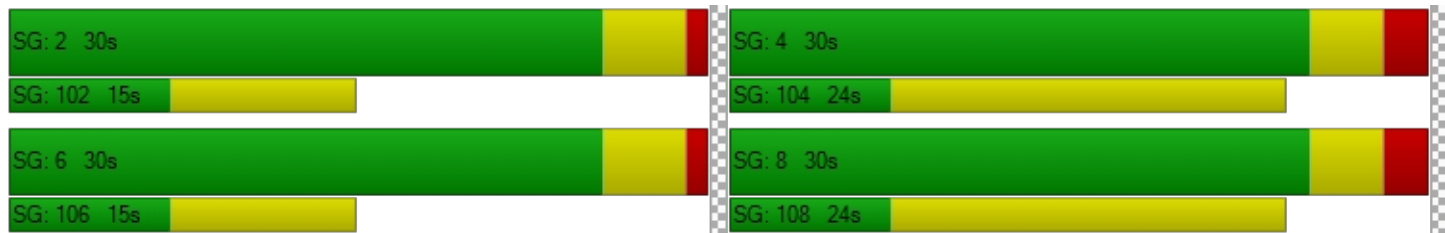
X, volume / capacity	0.11	0.82	0.84	0.26	0.69	0.69	0.84	0.59
d, Delay for Lane Group [s/veh]	22.97	24.14	25.38	31.88	18.31	18.51	25.46	14.67
Lane Group LOS	C	C	C	C	B	B	C	B
Critical Lane Group	No	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.31	9.01	9.05	0.74	6.33	6.29	8.39	3.93
50th-Percentile Queue Length [ft]	7.85	225.20	226.14	18.47	158.13	157.26	209.65	98.31
95th-Percentile Queue Length [veh]	0.57	13.93	13.98	1.33	10.45	10.40	13.14	7.08
95th-Percentile Queue Length [ft]	14.13	348.26	349.46	33.25	261.24	260.08	328.38	176.96

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	22.97	24.69	25.38	31.88	18.41	18.51	25.46	25.46	25.46	14.67	14.67	14.67
Movement LOS	C	C	C	C	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	24.72			18.89			25.46			14.67		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	21.73											
Intersection LOS	C											
Intersection V/C	0.749											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 152: CENTINELA AVENUE/BROADWAY**

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

**Intersection Setup**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Broadway			Ohio Av			Ce Av			Ce Av		
Base Volume Input [veh/h]	30	366	90	30	140	30	70	512	60	20	407	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	366	90	30	140	30	70	512	60	20	407	20
Peak Hour Factor	0.9789	0.9789	0.9789	0.7712	0.7712	0.7712	0.9486	0.9486	0.9486	0.9242	0.9242	0.9242
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	93	23	10	45	10	18	135	16	5	110	5
Total Analysis Volume [veh/h]	31	374	92	39	182	39	74	540	63	22	440	22
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	27			14			28			10		
Bicycle Volume [bicycles/h]	5			3			18			8		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	0.7	0.0	0.0	0.7	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	30	0	0	30	0	0	30	0	0	30	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	8	0	0	8	0	0	12	0	0	12	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	R	C	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	21	21	21	21	21	30	30
g / C, Green / Cycle	0.35	0.35	0.35	0.35	0.35	0.50	0.50
(v / s)_j Volume / Saturation Flow Rate	0.03	0.26	0.04	0.10	0.03	0.39	0.26
s, saturation flow rate [veh/h]	1212	1773	923	1863	1524	1750	1843
c, Capacity [veh/h]	407	616	186	647	529	941	983
d1, Uniform Delay [s]	17.95	17.35	27.04	14.17	13.12	11.90	10.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.08	1.93	0.56	0.24	0.06	4.74	1.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

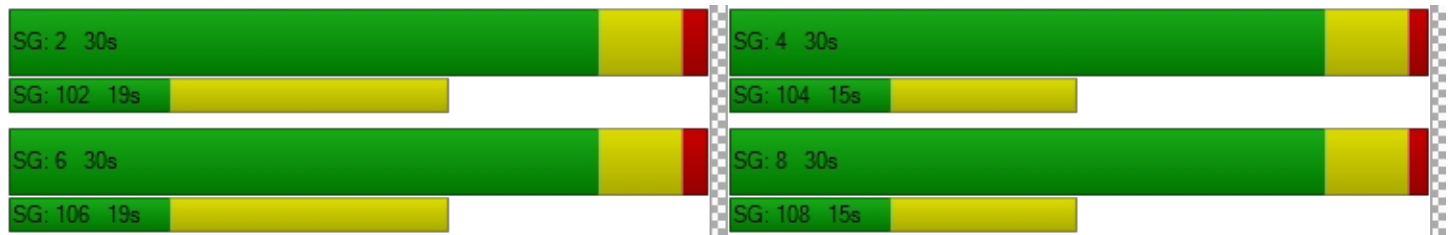
X, volume / capacity	0.08	0.76	0.21	0.28	0.07	0.72	0.49
d, Delay for Lane Group [s/veh]	18.03	19.28	27.59	14.41	13.18	16.64	11.89
Lane Group LOS	B	B	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.32	5.25	0.54	1.66	0.33	6.80	3.89
50th-Percentile Queue Length [ft]	7.88	131.26	13.56	41.44	8.23	169.92	97.15
95th-Percentile Queue Length [veh]	0.57	9.01	0.98	2.98	0.59	11.07	7.00
95th-Percentile Queue Length [ft]	14.18	225.21	24.40	74.59	14.81	276.81	174.88

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	18.03	19.28	19.28	27.59	14.41	13.18	16.64	16.64	16.64	11.89	11.89	11.89
Movement LOS	B	B	B	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.20			16.20			16.64			11.89		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	16.04											
Intersection LOS	B											
Intersection V/C	0.650											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 154: CENTINELA AVENUE (EAST)/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.550

**Intersection Setup**

Name	S Ce						OI BI			W Olympic Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			Yes		

**Volumes**

Name	S Ce						OI BI			W Olympic Blvd		
Base Volume Input [veh/h]	508	0	160	0	0	0	0	1443	593	60	1585	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	508	0	160	0	0	0	0	1443	593	60	1585	0
Peak Hour Factor	0.8277	0.8277	0.8277	0.5714	0.5714	0.5714	0.8844	0.8844	0.8844	0.9237	0.9237	0.9237
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	0	48	0	0	0	0	408	168	16	429	0
Total Analysis Volume [veh/h]	614	0	193	0	0	0	0	1632	671	65	1716	0
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			55		
Bicycle Volume [bicycles/h]	0			5			0			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	64.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Split	Split	Split	Split	Split	Split	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	4	0	0	3	0	0	6	4	0	2	0
Auxiliary Signal Groups									4,6			
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	9	0	0	8	0	0	10	9	0	10	0
Maximum Green [s]	0	30	0	0	10	0	0	40	30	0	40	0
Amber [s]	0.0	3.7	0.0	0.0	3.2	0.0	0.0	4.1	3.7	0.0	4.1	0.0
All red [s]	0.0	1.3	0.0	0.0	1.8	0.0	0.0	0.9	1.3	0.0	0.9	0.0
Split [s]	0	41	0	0	19	0	0	60	41	0	60	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	4.6	3.0	0.0	4.8	0.0
Walk [s]	0	7	0	0	0	0	0	7	7	0	7	0
Pedestrian Clearance [s]	0	21	0	0	0	0	0	10	21	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No			No			Yes	No		Yes	
Maximum Recall		No			No			No	No		No	
Pedestrian Recall		No			No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	33	33	0	72	72	110	72	72	72
g / C, Green / Cycle	0.28	0.28	0.00	0.60	0.60	0.92	0.60	0.60	0.60
(v / s)_j Volume / Saturation Flow Rate	0.23	0.23	0.00	0.00	0.32	0.42	0.21	0.31	0.31
s, saturation flow rate [veh/h]	1810	1675	1863	283	5176	1615	313	3618	1900
c, Capacity [veh/h]	504	466	7	174	3118	1479	185	2179	1145
d1, Uniform Delay [s]	40.46	40.75	0.00	0.00	13.83	0.73	27.41	13.74	13.74
k, delay calibration	0.13	0.14	0.11	0.50	0.50	0.46	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.98	5.22	0.00	0.00	0.63	0.93	5.20	0.88	1.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.82	0.84	0.00	0.00	0.52	0.45	0.35	0.52	0.52
d, Delay for Lane Group [s/veh]	44.43	45.97	0.00	0.00	14.46	1.65	32.62	14.62	15.41
Lane Group LOS	D	D	A	A	B	A	C	B	B
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	11.91	11.52	0.00	0.00	8.23	0.38	1.66	8.54	9.22
50th-Percentile Queue Length [ft]	297.77	287.95	0.00	0.00	205.84	9.52	41.42	213.48	230.50
95th-Percentile Queue Length [veh]	17.57	17.08	0.00	0.00	12.94	0.69	2.98	13.33	14.20
95th-Percentile Queue Length [ft]	439.27	427.10	0.00	0.00	323.49	17.13	74.55	333.29	355.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	44.94	45.97	45.97	0.00	0.00	0.00	0.00	14.46	1.65	32.62	14.89	15.41
Movement LOS	D	D	D	A	A	A	A	B	A	C	B	B
d_A, Approach Delay [s/veh]	45.18			0.00			10.73			15.54		
Approach LOS	D			A			B			B		
d_I, Intersection Delay [s/veh]	18.16											
Intersection LOS	B											
Intersection V/C	0.550											

**Sequence**

Ring 1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 168: Arizona Ave / 23rd St.**

Control Type: All-way stop  
 Analysis Method: HCM 2010  
 Analysis Period: 15 minutes

Delay (sec / veh): 43.2  
 Level Of Service: E  
 Volume to Capacity (v/c): 1.002

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			23rd St			23rd St		
Base Volume Input [veh/h]	20	293	112	0	233	32	24	202	90	14	137	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	293	112	0	233	32	24	202	90	14	137	20
Peak Hour Factor	0.8701	0.8701	0.8701	0.7955	0.7955	0.7955	0.8154	0.8154	0.8154	0.7944	0.7944	0.7944
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	84	32	0	73	10	7	62	28	4	43	6
Total Analysis Volume [veh/h]	23	337	129	0	293	40	29	248	110	18	172	25
Pedestrian Volume [ped/h]	10			5			6			7		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	489	461	472	427
Degree of Utilization, x	1.00	0.72	0.82	0.50

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	13.61	5.75	7.84	2.76
95th-Percentile Queue Length [ft]	340.34	143.80	196.02	68.88
Approach Delay [s/veh]	68.61	28.65	36.77	19.67
Approach LOS	F	D	E	C
Intersection Delay [s/veh]	43.22			
Intersection LOS	E			

**Intersection Level Of Service Report**

**Intersection 171: TWENTIETH STREET \ (WEST) / MONTANA AVENUE \ (102)**

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.423

**Intersection Setup**

Name	Montana Ave		Montana Ave		20th St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Montana Ave		Montana Ave		20th St	
Base Volume Input [veh/h]	10	590	656	44	69	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	590	656	44	69	20
Peak Hour Factor	0.8994	0.8994	0.9578	0.9578	0.8088	0.8088
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	164	171	11	21	6
Total Analysis Volume [veh/h]	11	656	685	46	85	25
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	12		0		16	
Bicycle Volume [bicycles/h]	1		0		5	

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	0	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	7	7	0	7	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.6	3.6	0.0	3.6	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	30	30	0	30	0
Vehicle Extension [s]	0.0	2.0	2.0	0.0	2.0	0.0
Walk [s]	0	7	7	0	7	0
Pedestrian Clearance [s]	0	10	10	0	10	0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	2.6	0.0	2.6	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	R	C
C, Cycle Length [s]	25	25	25	25	25
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	12	12	12	4
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.15
(v / s)_j Volume / Saturation Flow Rate	0.01	0.35	0.36	0.03	0.06
s, saturation flow rate [veh/h]	766	1900	1900	1588	1761
c, Capacity [veh/h]	374	902	902	754	277
d1, Uniform Delay [s]	9.99	5.27	5.40	3.55	9.47
k, delay calibration	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.43	0.50	0.01	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

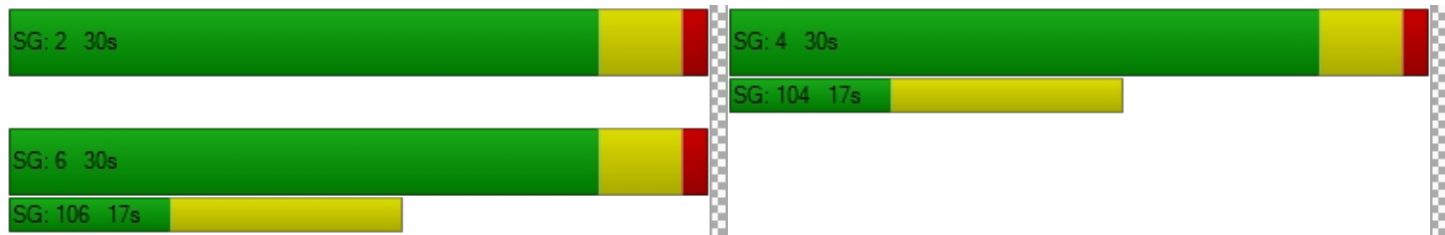
X, volume / capacity	0.03	0.73	0.76	0.06	0.40
d, Delay for Lane Group [s/veh]	10.00	5.69	5.90	3.57	9.81
Lane Group LOS	A	A	A	A	A
Critical Lane Group	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.04	0.85	0.92	0.04	0.40
50th-Percentile Queue Length [ft]	0.94	21.15	22.91	0.94	10.06
95th-Percentile Queue Length [veh]	0.07	1.52	1.65	0.07	0.72
95th-Percentile Queue Length [ft]	1.69	38.07	41.24	1.69	18.10

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	10.00	5.69	5.90	3.57	9.81	9.81
Movement LOS	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	5.77		5.75		9.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	6.05					
Intersection LOS	A					
Intersection V/C	0.423					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 172: CENTINELA \ (WEST) / OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

**Intersection Setup**

Name	Northbound			Eastbound			Westbound			Southeastbound		
Approach	Northbound			Eastbound			Westbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			0.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Northbound			Eastbound			Westbound			Ce Av		
Base Volume Input [veh/h]	0	0	0	70	1300	10	10	1430	680	740	10	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	2.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	70	1300	10	10	1430	680	740	10	110
Peak Hour Factor	1.0000	1.0000	1.0000	0.9786	0.9786	1.0000	1.0000	0.9133	0.9133	0.8200	1.0000	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	18	332	3	3	391	186	226	3	34
Total Analysis Volume [veh/h]	0	0	0	72	1328	10	10	1566	745	902	10	134
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss
Signal group	0	0	0	0	6	0	0	2	4	4	4	0
Auxiliary Signal Groups									2,4			
Lead / Lag	-	-	-	-	-	-	-	-	-	Lag	-	-
Minimum Green [s]	0	0	0	0	10	0	0	10	5	5	5	0
Maximum Green [s]	0	0	0	0	40	0	0	40	30	30	30	0
Amber [s]	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	3.6	3.6	3.6	0.0
All red [s]	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.1	1.4	1.4	1.4	0.0
Split [s]	0	0	0	0	50	0	0	50	40	40	40	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.2	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0	0	7	7	7	7	0
Pedestrian Clearance [s]	0	0	0	0	18	0	0	18	25	25	25	0
Rest In Walk					No			No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.6	2.6	2.6	2.6	0.0
Minimum Recall					Yes			Yes	No		No	
Maximum Recall					No			No	No		No	
Pedestrian Recall					No			No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	C	C	L	C	R	L	C
C, Cycle Length [s]		90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.60	0.00	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]		2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]		51	51	51	51	51	85	30	30
g / C, Green / Cycle		0.57	0.57	0.57	0.57	0.57	0.95	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate		0.22	0.35	0.35	0.02	0.43	0.46	0.26	0.09
s, saturation flow rate [veh/h]		334	1900	1895	407	3618	1615	3514	1600
c, Capacity [veh/h]		151	1081	1078	204	2058	1525	1154	526
d1, Uniform Delay [s]		35.60	12.87	12.87	22.21	14.69	0.26	27.20	22.22
k, delay calibration		0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		10.47	2.67	2.68	0.45	2.71	1.12	1.19	0.28
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		0.48	0.62	0.62	0.05	0.76	0.49	0.78	0.27
d, Delay for Lane Group [s/veh]		46.07	15.54	15.55	22.67	17.41	1.38	28.39	22.50
Lane Group LOS		D	B	B	C	B	A	C	C
Critical Lane Group		No	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		2.10	10.34	10.33	0.17	11.34	0.48	8.46	2.20
50th-Percentile Queue Length [ft]		52.60	258.55	258.14	4.29	283.62	11.88	211.60	54.96
95th-Percentile Queue Length [veh]		3.79	15.62	15.60	0.31	16.87	0.86	13.24	3.96
95th-Percentile Queue Length [ft]		94.69	390.40	389.89	7.72	421.72	21.39	330.88	98.93



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	46.07	15.55	15.55	22.67	17.41	1.38	28.39	22.50	22.50
Movement LOS				D	B	B	C	B	A	C	C	C
d_A, Approach Delay [s/veh]	0.00			17.11			12.29			27.58		
Approach LOS	A			B			B			C		
d_I, Intersection Delay [s/veh]	17.06											
Intersection LOS	B											
Intersection V/C	0.690											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 220: CENTINELA AVENUE/I-10 WB ON-OFF RAMPS**

Control Type:	Signalized	Delay (sec / veh):	46.7
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.781

**Intersection Setup**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Approach	Eastbound			Northeastbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Right	Right	Left2	Left	Right	Left	Left	Thru	Thru	Right	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	0.00			20.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			No			Yes		

**Volumes**

Name	I-10 WB ON-OFF RAMPS						Ce Av			Ce Av		
Base Volume Input [veh/h]	0	0	0	0	338	290	410	0	240	633	0	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	338	290	410	0	240	633	0	80
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	0.9547	0.9547	0.9600	1.0000	0.9600	0.9538	1.0000	0.9538
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	89	76	107	0	63	166	0	21
Total Analysis Volume [veh/h]	0	0	0	0	354	304	427	0	250	664	0	84
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			5			0			1		
Bicycle Volume [bicycles/h]	0			2			0			0		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	35.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Overlap	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	0	0	0	4	1	1	0	6	2	0	0
Auxiliary Signal Groups						1,4						
Lead / Lag	-	-	-	-	Lag	-	Lead	-	-	-	-	-
Minimum Green [s]	0	0	0	0	5	5	5	0	5	5	0	0
Maximum Green [s]	0	0	0	0	25	20	20	0	35	35	0	0
Amber [s]	0.0	0.0	0.0	0.0	3.6	3.0	3.0	0.0	3.6	3.6	0.0	0.0
All red [s]	0.0	0.0	0.0	0.0	1.4	1.0	1.0	0.0	1.0	0.5	0.0	0.0
Split [s]	0	0	0	0	22	24	24	0	68	44	0	0
Vehicle Extension [s]	0.0	0.0	0.0	0.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	0.0
Walk [s]	0	0	0	0	7	0	0	0	7	7	0	0
Pedestrian Clearance [s]	0	0	0	0	9	0	0	0	19	19	0	0
Rest In Walk					No				No	No		
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	0.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	0.0	2.6	2.6	2.6	0.0	2.6	2.1	0.0	0.0
Minimum Recall					No	No	No		Yes	Yes		
Maximum Recall					No	No	No		No	No		
Pedestrian Recall					No	No	No		No	No		
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group		L	R	L	C	C	R
C, Cycle Length [s]		90	90	90	90	90	90
L, Total Lost Time per Cycle [s]		4.60	4.60	4.60	4.60	4.10	4.10
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.60	0.00	2.60	2.60	2.10	2.10
g_i, Effective Green Time [s]		17	41	19	63	40	40
g / C, Green / Cycle		0.19	0.46	0.22	0.70	0.44	0.44
(v / s)_i Volume / Saturation Flow Rate		0.20	0.19	0.24	0.13	0.35	0.05
s, saturation flow rate [veh/h]		1810	1594	1810	1900	1900	1615
c, Capacity [veh/h]		350	744	390	1338	842	716
d1, Uniform Delay [s]		36.29	15.80	35.31	4.54	21.46	14.73
k, delay calibration		0.22	0.31	0.45	0.50	0.50	0.50
l, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		34.16	1.04	71.50	0.31	7.41	0.33
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity		1.01	0.41	1.09	0.19	0.79	0.12
d, Delay for Lane Group [s/veh]		70.45	16.84	106.80	4.85	28.87	15.06
Lane Group LOS		F	B	F	A	C	B
Critical Lane Group		Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]		11.03	4.31	16.06	1.41	13.00	1.04
50th-Percentile Queue Length [ft]		275.76	107.70	401.55	35.32	324.94	26.11
95th-Percentile Queue Length [veh]		16.56	7.71	23.77	2.54	18.91	1.88
95th-Percentile Queue Length [ft]		414.12	192.79	594.13	63.58	472.75	47.00

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	70.45	16.84	106.80	0.00	4.85	28.87	0.00	15.06
Movement LOS					F	B	F		A	C		B
d_A, Approach Delay [s/veh]	0.00			45.68			69.15			27.32		
Approach LOS	A			D			E			C		
d_I, Intersection Delay [s/veh]	46.71											
Intersection LOS	D											
Intersection V/C	0.781											

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 352: BUNDY DRIVE/OHIO AVENUE**

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

**Intersection Setup**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵			↵↵			↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Ohio Av			Ohio Av			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	126	250	140	100	70	10	60	1225	50	0	917	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	126	250	140	100	70	10	60	1225	50	0	917	80
Peak Hour Factor	0.9040	0.9040	0.9040	0.8966	0.8966	0.8966	0.9036	0.9036	0.9036	1.0000	0.8618	0.8618
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	69	39	28	20	3	17	339	14	0	266	23
Total Analysis Volume [veh/h]	139	277	155	112	78	11	66	1356	55	0	1064	93
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	61			36			59			32		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	L	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	28	28	28	28	28	53	53	53	53	53
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59
(v / s)_j Volume / Saturation Flow Rate	0.12	0.17	0.12	0.11	0.05	0.15	0.29	0.29	0.35	0.36
s, saturation flow rate [veh/h]	1144	1676	1344	977	1630	435	3192	1631	1676	1616
c, Capacity [veh/h]	361	521	418	225	507	228	1873	957	984	949
d1, Uniform Delay [s]	29.16	25.60	24.16	36.89	22.61	23.05	10.84	10.88	11.72	11.96
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.67	0.84	0.55	1.71	0.16	3.18	0.95	1.87	2.57	2.92
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.39	0.53	0.37	0.50	0.18	0.29	0.50	0.50	0.59	0.61
d, Delay for Lane Group [s/veh]	29.84	26.44	24.71	38.60	22.77	26.23	11.79	12.75	14.30	14.88
Lane Group LOS	C	C	C	D	C	C	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	2.60	4.88	2.58	2.44	1.37	1.26	5.14	5.55	7.28	7.47
50th-Percentile Queue Length [ft]	64.91	122.07	64.43	60.91	34.34	31.48	128.49	138.77	181.90	186.82
95th-Percentile Queue Length [veh]	4.67	8.51	4.64	4.39	2.47	2.27	8.86	9.41	11.70	11.96
95th-Percentile Queue Length [ft]	116.83	212.66	115.98	109.64	61.81	56.66	221.44	235.37	292.49	298.90



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	29.84	26.44	24.71	38.60	22.77	22.77	26.23	12.09	12.75	0.00	14.56	14.88
Movement LOS	C	C	C	D	C	C	C	B	B		B	B
d_A, Approach Delay [s/veh]	26.80			31.59			12.74			14.59		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.84											
Intersection LOS	B											
Intersection V/C	0.523											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 377: BUNDY DRIVE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	42.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.762

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	110	837	80	184	1273	100	150	710	104	70	660	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	837	80	184	1273	100	150	710	104	70	660	60
Peak Hour Factor	0.9459	0.9459	0.9459	0.8312	0.8312	0.8312	0.8631	0.8631	0.8631	0.8855	0.8855	0.8855
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	221	21	55	383	30	43	206	30	20	186	17
Total Analysis Volume [veh/h]	116	885	85	221	1532	120	174	823	120	79	745	68
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	69			80			49			127		
Bicycle Volume [bicycles/h]	7			2			2			12		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	0	5	5	0	5	5	0
Maximum Green [s]	10	30	0	10	30	0	10	30	0	10	30	0
Amber [s]	3.0	4.0	0.0	3.0	3.6	0.0	3.0	3.9	0.0	3.0	3.9	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.1	0.0	1.0	1.1	0.0
Split [s]	10	36	0	10	36	0	14	30	0	14	30	0
Vehicle Extension [s]	3.0	4.0	0.0	3.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall	No	Yes		No	Yes		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	46	36	36	46	37	37	35	27	27	35	23	23
g / C, Green / Cycle	0.51	0.40	0.40	0.51	0.41	0.41	0.39	0.30	0.30	0.39	0.26	0.26
(v / s)_j Volume / Saturation Flow Rate	0.21	0.25	0.06	0.13	0.43	0.08	0.18	0.25	0.26	0.10	0.22	0.22
s, saturation flow rate [veh/h]	558	3547	1501	1643	3547	1418	982	1900	1764	807	1900	1806
c, Capacity [veh/h]	265	1401	593	832	1442	577	364	566	526	288	491	466
d1, Uniform Delay [s]	20.16	21.99	17.49	12.68	26.74	17.33	21.42	29.74	30.06	20.95	31.67	31.86
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.26	0.27	0.11	0.19	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.16	2.18	0.51	0.78	42.10	0.82	4.44	8.29	11.12	0.51	6.61	8.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

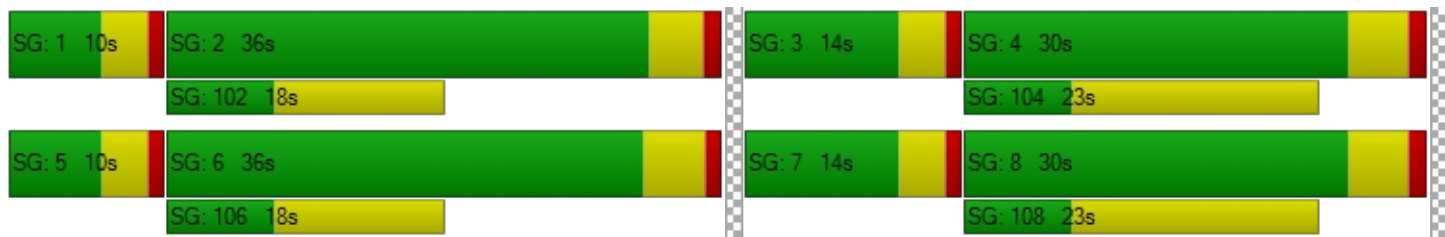
X, volume / capacity	0.44	0.63	0.14	0.27	1.06	0.21	0.48	0.85	0.88	0.27	0.84	0.86
d, Delay for Lane Group [s/veh]	25.32	24.16	18.00	13.46	68.83	18.15	25.86	38.04	41.17	21.46	38.28	40.05
Lane Group LOS	C	C	B	B	F	B	C	D	D	C	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.57	7.64	1.19	2.59	22.94	1.70	2.81	10.63	10.64	1.07	9.16	9.13
50th-Percentile Queue Length [ft]	39.18	190.98	29.66	64.84	573.52	42.39	70.24	265.81	266.12	26.79	229.09	228.31
95th-Percentile Queue Length [veh]	2.82	12.17	2.14	4.67	32.14	3.05	5.06	15.98	16.00	1.93	14.13	14.09
95th-Percentile Queue Length [ft]	70.52	304.30	53.38	116.71	803.53	76.30	126.44	399.50	399.89	48.21	353.20	352.22

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	25.32	24.16	18.00	13.46	68.83	18.15	25.86	39.34	41.17	21.46	39.07	40.05
Movement LOS	C	C	B	B	F	B	C	D	D	C	D	D
d_A, Approach Delay [s/veh]	23.80			59.05			37.43			37.58		
Approach LOS	C			E			D			D		
d_I, Intersection Delay [s/veh]	42.63											
Intersection LOS	D											
Intersection V/C	0.762											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 378: BUNDY DRIVE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	↵↵↵						↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	72	1085	100	0	899	80	119	1143	120	40	867	51
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1085	100	0	899	80	119	1143	120	40	867	51
Peak Hour Factor	0.8832	0.8832	0.8832	1.0000	0.8971	0.8971	0.9247	0.9247	0.9247	0.7731	0.7731	0.7731
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	307	28	0	251	22	32	309	32	13	280	16
Total Analysis Volume [veh/h]	82	1228	113	0	1002	89	129	1236	130	52	1121	66
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	92			58			35			96		
Bicycle Volume [bicycles/h]	1			2			8			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	30.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	20	0	0	20	0	0	20	0	0	20	0
Maximum Green [s]	0	40	0	0	40	0	0	40	0	0	40	0
Amber [s]	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.4	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.0	1.1	0.0
Split [s]	0	45	0	0	45	0	0	45	0	0	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	12	0	0	21	0	0	17	0	0	19	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	C	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	37	37	37	37	37	44	44	44	44	44	44
g / C, Green / Cycle	0.41	0.41	0.41	0.41	0.41	0.49	0.49	0.49	0.49	0.49	0.49
(v / s)_j Volume / Saturation Flow Rate	0.16	0.36	0.37	0.21	0.21	0.27	0.34	0.09	0.12	0.32	0.32
s, saturation flow rate [veh/h]	520	1863	1795	3547	1743	479	3618	1504	449	1900	1846
c, Capacity [veh/h]	207	761	734	1450	712	184	1769	735	165	929	903
d1, Uniform Delay [s]	30.58	24.75	24.95	19.80	19.89	37.20	17.85	12.87	33.54	17.16	17.25
k, delay calibration	0.11	0.32	0.33	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	10.20	11.82	0.27	0.57	20.13	2.32	0.52	4.98	3.44	3.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.40	0.89	0.90	0.50	0.51	0.70	0.70	0.18	0.32	0.64	0.65
d, Delay for Lane Group [s/veh]	31.81	34.95	36.76	20.06	20.45	57.33	20.17	13.39	38.52	20.60	20.89
Lane Group LOS	C	C	D	C	C	E	C	B	D	C	C
Critical Lane Group	No	No	Yes	No	No	No	Yes	No	No	No	No
50th-Percentile Queue Length [veh]	1.63	14.87	14.93	5.51	5.59	3.88	9.84	1.51	1.24	9.33	9.24
50th-Percentile Queue Length [ft]	40.82	371.81	373.21	137.66	139.73	97.01	245.99	37.81	30.93	233.14	231.04
95th-Percentile Queue Length [veh]	2.94	21.20	21.26	9.35	9.47	6.98	14.98	2.72	2.23	14.33	14.23
95th-Percentile Queue Length [ft]	73.48	529.92	531.62	233.87	236.66	174.61	374.60	68.06	55.67	358.35	355.68



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	31.81	35.76	36.76	0.00	20.17	20.45	57.33	20.17	13.39	38.52	20.74	20.89
Movement LOS	C	D	D		C	C	E	C	B	D	C	C
d_A, Approach Delay [s/veh]	35.62			20.19			22.79			21.49		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	25.42											
Intersection LOS	C											
Intersection V/C	0.711											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 379: BUNDY DRIVE/OLYMPIC BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	60.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.797

**Intersection Setup**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Approach	Eastbound			Westbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	W Olympic Blvd			W Olympic Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	166	1073	304	320	1228	150	184	1299	110	60	1004	103
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	166	1073	304	320	1228	150	184	1299	110	60	1004	103
Peak Hour Factor	0.8801	0.8801	0.8801	0.9307	0.9307	0.9307	0.9519	0.9519	0.9519	0.8524	0.8524	0.8524
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	305	86	86	330	40	48	341	29	18	294	30
Total Analysis Volume [veh/h]	189	1219	345	344	1319	161	193	1365	116	70	1178	121
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	64			104			30			51		
Bicycle Volume [bicycles/h]	2			14			10			1		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	19.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal group	5	2	3	1	6	7	3	8	1	7	4	3
Auxiliary Signal Groups			2,3			6,7			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	5	5	10	5	5	10	5
Maximum Green [s]	15	40	15	15	40	15	15	40	15	15	40	15
Amber [s]	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0	3.0	3.9	3.0
All red [s]	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0	1.0	2.1	1.0
Split [s]	17	43	17	17	43	17	17	43	17	17	43	17
Vehicle Extension [s]	3.0	4.6	3.0	3.0	4.5	3.0	3.0	4.7	3.0	3.0	5.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	17	0	0	27	0	0	20	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	2.6	2.6	2.6	2.6	2.6	2.6	4.0	2.6	2.6	2.6	2.6
Minimum Recall	No	Yes	No	No	Yes	No	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	No	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	6.00	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	0.00	2.60	2.60	0.00	2.60	4.00	0.00	2.60	2.60	2.60
g_i, Effective Green Time [s]	12	38	55	12	38	52	12	41	59	9	38	38
g / C, Green / Cycle	0.10	0.32	0.46	0.10	0.32	0.43	0.10	0.34	0.49	0.07	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.24	0.22	0.10	0.26	0.11	0.11	0.38	0.08	0.04	0.33	0.08
s, saturation flow rate [veh/h]	1810	5074	1563	3445	5074	1499	1810	3618	1459	1774	3618	1499
c, Capacity [veh/h]	187	1628	731	356	1628	656	187	1220	723	130	1154	478
d1, Uniform Delay [s]	53.83	36.44	21.84	53.62	37.41	21.27	53.83	39.78	16.59	53.66	40.88	30.28
k, delay calibration	0.27	0.50	0.50	0.11	0.50	0.50	0.29	0.21	0.14	0.11	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	51.36	3.20	2.18	15.39	4.48	0.89	58.18	58.53	0.13	3.41	23.40	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	1.01	0.75	0.47	0.97	0.81	0.25	1.03	1.12	0.16	0.54	1.02	0.25
d, Delay for Lane Group [s/veh]	105.19	39.65	24.02	69.01	41.89	22.16	112.01	98.31	16.72	57.07	64.28	30.87
Lane Group LOS	F	D	C	E	D	C	F	F	B	E	F	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	8.26	10.94	6.93	5.92	12.42	3.03	8.61	27.39	1.75	2.15	20.35	2.66
50th-Percentile Queue Length [ft]	206.47	273.41	173.26	148.08	310.56	75.68	215.34	684.75	43.80	53.71	508.70	66.39
95th-Percentile Queue Length [veh]	13.03	16.36	11.25	9.91	18.20	5.45	13.59	38.70	3.15	3.87	28.13	4.78
95th-Percentile Queue Length [ft]	325.63	409.00	281.20	247.86	455.07	136.22	339.87	967.51	78.84	96.68	703.13	119.49

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	105.19	39.65	24.02	69.01	41.89	22.16	112.01	98.31	16.72	57.07	64.28	30.87
Movement LOS	F	D	C	E	D	C	F	F	B	E	F	C
d_A, Approach Delay [s/veh]	43.64			45.27			94.24			60.96		
Approach LOS	D			D			F			E		
d_I, Intersection Delay [s/veh]	60.46											
Intersection LOS	E											
Intersection V/C	0.797											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 383: BUNDY DRIVE/I-10 EB ON RAMP**

Control Type:	Signalized	Delay (sec / veh):	55.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

**Intersection Setup**

Name	Southwestbound		Northwestbound		Southeastbound	
Approach	Southwestbound		Northwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

**Volumes**

Name	Southwestbound		Northwestbound		Southeastbound	
Base Volume Input [veh/h]	0	0	988	380	758	1755
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	988	380	758	1755
Peak Hour Factor	1.0000	1.0000	0.8979	0.8979	0.9431	0.9431
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	275	106	201	465
Total Analysis Volume [veh/h]	0	0	1100	423	804	1861
Presence of On-Street Parking			No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	5		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Overlap
Signal group	0	0	2	0	4	4
Auxiliary Signal Groups						2,4
Lead / Lag	-	-	-	-	Lag	-
Minimum Green [s]	0	0	10	0	5	5
Maximum Green [s]	0	0	30	0	50	50
Amber [s]	0.0	0.0	3.9	0.0	3.0	3.0
All red [s]	0.0	0.0	0.8	0.0	1.0	1.0
Split [s]	0	0	55	0	35	35
Vehicle Extension [s]	0.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	10	0	0	0
Rest In Walk			No			No
I1, Start-Up Lost Time [s]	0.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	0.0	2.6	0.0	2.6	2.6
Minimum Recall			Yes		No	No
Maximum Recall			No		No	No
Pedestrian Recall			No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	R	L	C
C, Cycle Length [s]	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00
g_i, Effective Green Time [s]	50	50	30	85
g / C, Green / Cycle	0.56	0.56	0.34	0.95
(v / s)_i Volume / Saturation Flow Rate	0.34	0.30	0.50	0.58
s, saturation flow rate [veh/h]	3192	1419	1597	3192
c, Capacity [veh/h]	1782	792	542	3025
d1, Uniform Delay [s]	13.39	12.51	29.72	0.29
k, delay calibration	0.50	0.50	0.39	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.61	2.57	225.23	0.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.62	0.53	1.48	0.62
d, Delay for Lane Group [s/veh]	15.01	15.08	254.95	1.24
Lane Group LOS	B	B	F	A
Critical Lane Group	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	7.23	5.47	44.92	0.40
50th-Percentile Queue Length [ft]	180.69	136.75	1123.09	9.94
95th-Percentile Queue Length [veh]	11.64	9.31	69.07	0.72
95th-Percentile Queue Length [ft]	290.91	232.65	1726.83	17.88



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	0.00	0.00	15.01	15.08	254.95	1.24
Movement LOS			B	B	F	A
d_A, Approach Delay [s/veh]	0.00		15.03		77.78	
Approach LOS	A		B		E	
d_I, Intersection Delay [s/veh]	54.96					
Intersection LOS	D					
Intersection V/C	0.848					

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 384: BARRINGTON AVENUE/WILSHIRE BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	129.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.881

**Intersection Setup**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

**Volumes**

Name	Wilshire Blvd			Wilshire Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	120	1761	130	96	1147	70	120	400	148	100	460	110
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	1761	130	96	1147	70	120	400	148	100	460	110
Peak Hour Factor	0.8488	0.8488	0.8488	0.9089	0.9089	0.9089	0.9500	0.9500	0.9500	0.9176	0.9176	0.9176
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	519	38	26	315	19	32	105	39	27	125	30
Total Analysis Volume [veh/h]	141	2075	153	106	1262	77	126	421	156	109	501	120
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			59			96			76		
Bicycle Volume [bicycles/h]	1			3			5			1		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	1.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	10	10	0	0	10	0	0	10	0
Maximum Green [s]	0	50	0	15	50	0	0	40	0	0	40	0
Amber [s]	0.0	4.1	0.0	3.6	4.1	0.0	0.0	3.7	0.0	0.0	3.7	0.0
All red [s]	0.0	1.3	0.0	1.0	1.3	0.0	0.0	1.7	0.0	0.0	1.7	0.0
Split [s]	0	41	0	15	56	0	0	34	0	0	34	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	18	0	0	21	0	0	18	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	2.6	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No		No	No			No			No	
Maximum Recall		Yes		No	Yes			Yes			Yes	
Pedestrian Recall		No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	R	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	0.00	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	38	38	38	52	52	52	29	29	29	29	29	29
g / C, Green / Cycle	0.42	0.42	0.42	0.57	0.57	0.57	0.33	0.33	0.33	0.33	0.33	0.33
(v / s)_j Volume / Saturation Flow Rate	0.36	0.65	0.11	0.21	0.40	0.06	0.18	0.13	0.12	0.13	0.19	0.19
s, saturation flow rate [veh/h]	394	3192	1407	509	3192	1351	720	3192	1328	846	1676	1557
c, Capacity [veh/h]	124	1329	586	330	1824	772	184	1044	434	253	548	509
d1, Uniform Delay [s]	43.40	26.40	17.29	17.94	13.74	8.81	39.81	23.61	23.22	32.86	25.34	25.40
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	121.84	256.32	1.08	2.55	2.18	0.26	18.81	1.16	2.31	5.30	4.51	4.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

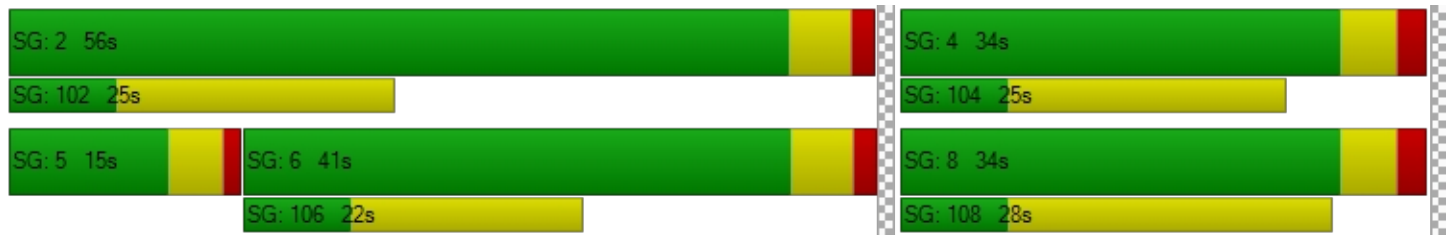
X, volume / capacity	1.14	1.56	0.26	0.32	0.69	0.10	0.69	0.40	0.36	0.43	0.58	0.59
d, Delay for Lane Group [s/veh]	165.24	282.73	18.37	20.50	15.93	9.07	58.62	24.77	25.53	38.16	29.85	30.36
Lane Group LOS	F	F	B	C	B	A	E	C	C	D	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	6.96	60.68	2.19	1.15	8.76	0.70	3.76	3.56	2.75	2.51	6.23	5.91
50th-Percentile Queue Length [ft]	173.91	1517.01	54.80	28.80	218.96	17.44	93.89	89.02	68.78	62.68	155.73	147.81
95th-Percentile Queue Length [veh]	12.12	94.17	3.95	2.07	13.61	1.26	6.76	6.41	4.95	4.51	10.32	9.90
95th-Percentile Queue Length [ft]	302.95	2354.26	98.63	51.85	340.30	31.38	169.00	160.23	123.81	112.83	258.07	247.51

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	165.24	282.73	18.37	20.50	15.93	9.07	58.62	24.77	25.53	38.16	30.03	30.36
Movement LOS	F	F	B	C	B	A	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	258.66			15.90			31.00			31.30		
Approach LOS	F			B			C			C		
d_I, Intersection Delay [s/veh]	129.67											
Intersection LOS	F											
Intersection V/C	0.881											

**Sequence**

Ring 1	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**

**Intersection 385: BARRINGTON AVENUE/SANTA MONICA BOULEVARD**

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.729

**Intersection Setup**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Santa Monica Blvd			Santa Monica Blvd			Barrington Ave			Barrington Ave		
Base Volume Input [veh/h]	148	1116	100	80	994	110	70	490	100	70	460	66
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	148	1116	100	80	994	110	70	490	100	70	460	66
Peak Hour Factor	0.9038	0.9038	0.9038	0.9742	0.9742	0.9742	0.8145	0.8145	0.8145	0.8895	0.8895	0.8895
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	309	28	21	255	28	21	150	31	20	129	19
Total Analysis Volume [veh/h]	164	1235	111	82	1020	113	86	602	123	79	517	74
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	24			37			7			7		
Bicycle Volume [bicycles/h]	3			6			2			2		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	49.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	2	0	0	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	15	0	0	15	0	0	21	0	0	21	0
Maximum Green [s]	0	20	0	0	20	0	0	15	0	0	15	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0	0.0	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.0	1.4	0.0
Split [s]	0	59	0	0	59	0	0	51	0	0	51	0
Vehicle Extension [s]	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.2	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	11	0	0	11	0	0	16	0	0	16	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		Yes			Yes			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	54	54	54	54	54	54	46	46	46	46	46
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.50	0.50	0.42	0.42	0.42	0.42	0.42
(v / s)_j Volume / Saturation Flow Rate	0.37	0.28	0.28	0.23	0.24	0.24	0.12	0.36	0.09	0.11	0.36
s, saturation flow rate [veh/h]	445	3192	1601	364	3192	1584	740	1676	1406	733	1637
c, Capacity [veh/h]	210	1583	794	169	1583	786	116	705	591	117	688
d1, Uniform Delay [s]	39.20	19.43	19.46	36.22	18.32	18.35	52.79	28.82	20.24	52.43	28.90
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.04	0.33	0.04	0.04	0.33
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.35	1.47	2.94	9.58	1.03	2.10	3.46	8.64	0.06	2.48	9.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.78	0.57	0.57	0.48	0.48	0.48	0.74	0.85	0.21	0.67	0.86
d, Delay for Lane Group [s/veh]	63.55	20.90	22.39	45.80	19.35	20.45	56.25	37.46	20.30	54.91	38.09
Lane Group LOS	E	C	C	D	B	C	E	D	C	D	D
Critical Lane Group	Yes	No	No	No	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	5.96	8.13	8.51	2.46	6.43	6.67	2.49	15.60	2.01	2.27	15.45
50th-Percentile Queue Length [ft]	149.00	203.14	212.84	61.45	160.85	166.79	62.28	389.91	50.14	56.67	386.21
95th-Percentile Queue Length [veh]	9.96	12.80	13.30	4.42	10.59	10.91	4.48	22.07	3.61	4.08	21.89
95th-Percentile Queue Length [ft]	249.10	320.01	332.47	110.60	264.85	272.69	112.10	551.82	90.25	102.01	547.36

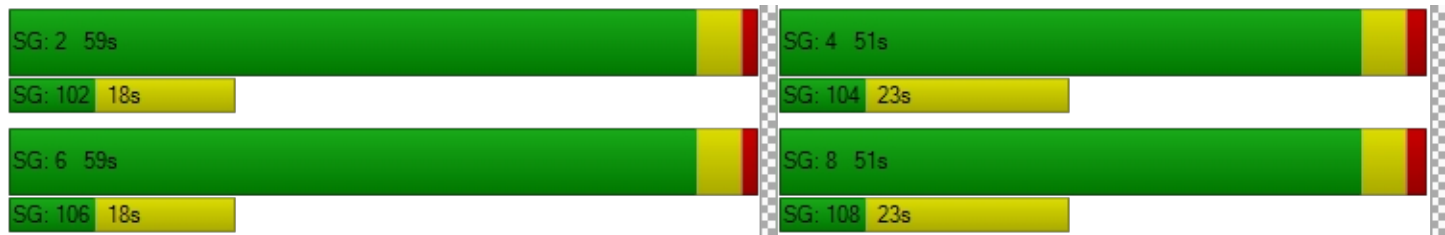


**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	63.55	21.31	22.39	45.80	19.64	20.45	56.25	37.46	20.30	54.91	38.09	38.09
Movement LOS	E	C	C	D	B	C	E	D	C	D	D	D
d_A, Approach Delay [s/veh]	25.98			21.48			36.85			40.08		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.02											
Intersection LOS	C											
Intersection V/C	0.729											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 1025: BUNDY DR/OCEAN PARK BL**

Control Type:	Signalized	Delay (sec / veh):	147.2
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.981

**Intersection Setup**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⇌⇌⇌			⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			30.00			40.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

**Volumes**

Name	Ocean Park Blvd			Ocean Park Blvd			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	40	700	940	30	340	30	320	1038	140	50	1495	170
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.00	2.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	700	940	30	340	30	320	1038	140	50	1495	170
Peak Hour Factor	0.9761	0.9761	0.9761	0.9008	0.9008	0.9008	0.9227	0.9227	0.9227	0.9506	0.9506	0.9506
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	179	241	8	94	8	87	281	38	13	393	45
Total Analysis Volume [veh/h]	41	717	963	33	377	33	347	1125	152	53	1573	179
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	13			0			6			7		
Bicycle Volume [bicycles/h]	4			0			4			6		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	80.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal group	3	8	1	7	4	0	1	6	0	5	2	3
Auxiliary Signal Groups			1,8									2,3
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	5	5	10	0	5	10	0	5	10	5
Maximum Green [s]	20	35	20	20	35	0	20	45	0	20	45	20
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	2.0	1.0	1.0	2.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	11	56	12	17	62	0	12	32	0	20	40	11
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	15	0	0	15	0	0	13	0	0	13	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.6	1.7	2.6	2.6	1.7	0.0	2.6	1.3	0.0	2.6	1.3	2.6
Minimum Recall	No	No	No	No	No		No	Yes		No	Yes	No
Maximum Recall	No	No	No	No	No		No	No		No	No	No
Pedestrian Recall	No	No	No	No	No		No	No		No	No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	R	L	C	C	L	C	C	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	3.70	3.70	4.60	3.70	3.70	3.70	3.30	3.30	3.30	3.30	3.30	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	1.70	0.00	0.00	1.70	1.70	0.00	1.30	1.30	0.00	1.30	0.00
g_i, Effective Green Time [s]	46	38	50	46	35	35	67	59	59	67	55	65
g / C, Green / Cycle	0.38	0.32	0.41	0.38	0.29	0.29	0.56	0.49	0.49	0.56	0.46	0.54
(v / s)_j Volume / Saturation Flow Rate	0.04	0.26	0.77	0.04	0.11	0.11	0.70	0.38	0.39	0.10	0.55	0.11
s, saturation flow rate [veh/h]	1148	2800	1252	810	1863	1808	495	1500	1824	556	2856	1580
c, Capacity [veh/h]	441	896	523	222	543	528	210	737	897	258	1313	859
d1, Uniform Delay [s]	24.79	37.31	35.78	27.74	33.88	33.92	44.53	25.03	25.34	19.76	32.44	14.09
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	1.70	385.96	0.30	0.44	0.46	314.85	7.73	6.97	1.79	96.89	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.09	0.80	1.84	0.15	0.38	0.38	1.65	0.77	0.79	0.21	1.20	0.21
d, Delay for Lane Group [s/veh]	24.88	39.01	421.74	28.04	34.32	34.38	359.38	32.76	32.32	21.55	129.33	14.64
Lane Group LOS	C	D	F	C	C	C	F	C	C	C	F	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.76	9.64	70.73	0.63	4.90	4.81	21.17	14.08	17.43	0.77	35.75	2.57
50th-Percentile Queue Length [ft]	19.03	241.01	1768.13	15.77	122.39	120.17	529.32	351.93	435.80	19.25	893.66	64.32
95th-Percentile Queue Length [veh]	1.37	14.73	113.56	1.14	8.52	8.40	37.34	20.23	24.28	1.39	51.67	4.63
95th-Percentile Queue Length [ft]	34.25	368.31	2839.08	28.38	213.10	210.06	933.60	505.76	606.98	34.65	1291.84	115.78

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	24.88	39.01	421.74	28.04	34.35	34.38	359.38	32.54	32.32	21.55	129.33	14.64
Movement LOS	C	D	F	C	C	C	F	C	C	C	F	B
d_A, Approach Delay [s/veh]	252.83			33.88			102.36			114.80		
Approach LOS	F			C			F			F		
d_I, Intersection Delay [s/veh]	147.25											
Intersection LOS	F											
Intersection V/C	0.981											

**Sequence**

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report**  
**Intersection 3775: Bundy Drive & Texas Avenue**

Control Type:	Signalized	Delay (sec / veh):	23.1
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

**Intersection Setup**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	⊕			⊕			⦿			⦿		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Texas Ave			Texas Ave			S Bundy Dr			S Bundy Dr		
Base Volume Input [veh/h]	30	280	74	60	90	40	10	874	80	70	794	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	280	74	60	90	40	10	874	80	70	794	20
Peak Hour Factor	0.9035	0.9035	0.9035	0.8317	0.8317	0.8317	0.9396	0.9396	0.9396	0.8072	0.8072	0.8072
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	77	20	18	27	12	3	233	21	22	246	6
Total Analysis Volume [veh/h]	33	310	82	72	108	48	11	930	85	87	984	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	17			18			22			14		
Bicycle Volume [bicycles/h]	0			3			4			7		

**Intersection Settings**

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	4.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	0	8	0	0	4	0	0	6	0	0	2	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	6	0	0	6	0	0	10	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	40	0	0	40	0
Amber [s]	0.0	3.2	0.0	0.0	3.2	0.0	0.0	3.9	0.0	0.0	3.9	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
Split [s]	0	31	0	0	31	0	0	59	0	0	59	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	8	0	0	8	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0	0.0	2.6	0.0
Minimum Recall		No			No			Yes			Yes	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	C	C	C	C	C	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	2.60	2.60
g_i, Effective Green Time [s]	26	26	54	54	54	54
g / C, Green / Cycle	0.29	0.29	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.28	0.31	0.33	0.33	0.44	0.44
s, saturation flow rate [veh/h]	1515	727	1649	1469	956	1513
c, Capacity [veh/h]	488	266	1038	887	626	914
d1, Uniform Delay [s]	30.83	30.26	10.38	10.50	13.71	12.64
k, delay calibration	0.32	0.39	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.14	23.37	1.87	2.42	5.84	5.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.87	0.86	0.52	0.55	0.68	0.73
d, Delay for Lane Group [s/veh]	43.97	53.63	12.25	12.92	19.55	17.84
Lane Group LOS	D	D	B	B	B	B
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	10.46	6.60	5.94	5.50	7.20	9.48
50th-Percentile Queue Length [ft]	261.58	164.88	148.61	137.56	180.07	237.11
95th-Percentile Queue Length [veh]	15.77	10.81	9.94	9.35	11.60	14.54
95th-Percentile Queue Length [ft]	394.20	270.17	248.58	233.73	290.10	363.38



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	43.97	43.97	43.97	53.63	53.63	53.63	12.25	12.54	12.92	19.55	18.43	17.84
Movement LOS	D	D	D	D	D	D	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	43.97			53.63			12.57			18.50		
Approach LOS	D			D			B			B		
d_I, Intersection Delay [s/veh]	23.10											
Intersection LOS	C											
Intersection V/C	0.758											

**Sequence**

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 841915: 23rd & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	66.0
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

**Intersection Setup**

Name	Broadway		Broadway		23rd Street	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		23rd Street	
Base Volume Input [veh/h]	0	859	570	0	33	60
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	859	570	0	33	60
Peak Hour Factor	1.0000	0.8690	0.8690	1.0000	0.7105	0.7105
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	247	164	0	12	21
Total Analysis Volume [veh/h]	0	989	656	0	46	84
Pedestrian Volume [ped/h]	4		4		28	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.45	0.19
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	65.96	15.22
Movement LOS		A	A		F	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	1.92	0.70
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	47.98	17.61
d_A, Approach Delay [s/veh]	0.00		0.00		33.17	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	2.43					
Intersection LOS	F					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.009

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	9	439	467	19	276	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	439	467	19	276	217
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	123	133	5	92	72
Total Analysis Volume [veh/h]	9	494	531	19	368	289
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.01	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.66	0.00	0.00	0.00	0.00	0.00
Movement LOS	A	A	A	A		
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.69	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.16		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	A					

**Intersection Level Of Service Report**  
**Intersection 927741: TWENTY-FIRST STREET/BROADWAY**

Control Type:	Two-way stop	Delay (sec / veh):	45.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

**Intersection Setup**

Name	Broadway		Broadway		21st St	
Approach	Northeastbound		Southwestbound		Southeastbound	
Lane Configuration	↑		↑		↗↘	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	Broadway		Broadway		21st St	
Base Volume Input [veh/h]	0	439	467	0	276	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	439	467	0	276	217
Peak Hour Factor	1.0000	0.8891	0.8798	1.0000	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	123	133	0	92	72
Total Analysis Volume [veh/h]	0	494	531	0	368	289
Pedestrian Volume [ped/h]	10		2		21	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.00	0.90	0.45	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	45.19	10.52	0.00	0.00	0.00
Movement LOS		E	B		A	A
95th-Percentile Queue Length [veh]	0.00	10.59	2.38	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	0.00	264.76	59.59	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	45.19		10.52		0.00	
Approach LOS	E		B		A	
d_I, Intersection Delay [s/veh]	16.59					
Intersection LOS	E					

**Intersection Level Of Service Report**

**Intersection 1144532: TWENTY-FIRST STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	24.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.892

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			21st St			21st St		
Base Volume Input [veh/h]	50	490	10	10	299	10	0	0	0	20	10	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	50	490	10	10	299	10	0	0	0	20	10	31
Peak Hour Factor	0.7887	0.7887	0.7887	0.8843	0.8843	0.8843	1.0000	1.0000	1.0000	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	155	3	3	85	3	0	0	0	7	3	10
Total Analysis Volume [veh/h]	63	621	13	11	338	11	0	0	0	27	13	41
Pedestrian Volume [ped/h]	35			23			5			6		



**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	781	729	550	596
Degree of Utilization, x	0.89	0.49	0.00	0.14

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	11.74	2.76	0.00	0.47
95th-Percentile Queue Length [ft]	293.57	69.11	0.00	11.71
Approach Delay [s/veh]	32.75	12.67	0.00	9.99
Approach LOS	D	B	A	A
Intersection Delay [s/veh]	24.78			
Intersection LOS	C			

**Intersection Level Of Service Report**

**Intersection 1454232: TWENTY-SECOND STREET/ARIZONA AVENUE**

Control Type:	All-way stop	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.740

**Intersection Setup**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Approach	Northeastbound			Southwestbound			Northwestbound			Southeastbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	Arizona Ave			Arizona Ave			22nd St			22nd St		
Base Volume Input [veh/h]	41	445	10	0	277	10	10	10	10	0	21	
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	
Total Hourly Volume [veh/h]	41	445	10	0	277	10	10	10	10	0	21	
Peak Hour Factor	0.8672	0.8672	0.8672	0.7794	0.7794	0.7794	0.5625	0.5625	0.5625	0.7143	0.7143	
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	
Total 15-Minute Volume [veh/h]	12	128	3	0	89	3	4	4	4	4	7	
Total Analysis Volume [veh/h]	47	513	12	0	355	13	18	18	18	14	29	
Pedestrian Volume [ped/h]	27			6			6			25		

**Intersection Settings**

**Lanes**

Capacity per Entry Lane [veh/h]	774	743	597	615
Degree of Utilization, x	0.74	0.50	0.09	0.07

**Movement, Approach, & Intersection Results**

95th-Percentile Queue Length [veh]	6.73	2.78	0.30	0.22
95th-Percentile Queue Length [ft]	168.13	69.59	7.43	5.62
Approach Delay [s/veh]	19.65	12.52	9.63	9.30
Approach LOS	C	B	A	A
Intersection Delay [s/veh]	16.17			
Intersection LOS	C			

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵			↵			↵			↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	27	11	1	6	4	280	14	25	355	8
Total Analysis Volume [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	93	83	83	93	86	86
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.77	0.69	0.69	0.77	0.72	0.72
(v / s)_j Volume / Saturation Flow Rate	0.04	0.07	0.03	0.02	0.04	0.32	0.32	0.17	0.39	0.39
s, saturation flow rate [veh/h]	1336	1497	1256	1531	438	1870	1832	582	1870	1853
c, Capacity [veh/h]	216	225	144	230	363	1298	1272	472	1341	1329
d1, Uniform Delay [s]	48.85	46.59	54.06	44.07	5.13	8.21	8.23	4.79	7.85	7.87
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.57	0.42	0.08	0.23	1.16	1.19	1.02	1.58	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.47	0.30	0.12	0.04	0.46	0.46	0.21	0.54	0.54
d, Delay for Lane Group [s/veh]	49.08	47.16	54.48	44.15	5.36	9.36	9.42	5.81	9.42	9.47
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.57	2.94	1.27	0.70	0.10	6.75	6.67	0.63	8.36	8.35
50th-Percentile Queue Length [ft]	39.15	73.40	31.82	17.60	2.47	168.74	166.73	15.77	209.10	208.87
95th-Percentile Queue Length [veh]	2.82	5.28	2.29	1.27	0.18	11.01	10.90	1.14	13.11	13.09
95th-Percentile Queue Length [ft]	70.47	132.12	57.28	31.69	4.44	275.26	272.61	28.39	327.68	327.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.08	47.16	47.16	54.48	44.15	44.15	5.36	9.39	9.42	5.81	9.45	9.47
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	47.82			50.50			9.34			9.21		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.34											
Intersection LOS	B											
Intersection V/C	0.464											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	334.36	499.36	545.21	454.56
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.159	2.008	2.918	2.925
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.827	1.675	2.542	2.838
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	36.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.195

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	28	42	0	680	738	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	42	0	680	738	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	11	0	170	185	0
Total Analysis Volume [veh/h]	28	42	0	680	738	0
Pedestrian Volume [ped/h]	10		10		10	



**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.19	0.11	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	35.98	15.08	0.00	0.00	0.00	0.00
Movement LOS	E	C		A	A	
95th-Percentile Queue Length [veh]	0.69	0.35	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	17.30	8.75	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.44		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.10					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	0	63	0	0	0	4	347	15	44	366	8
Total Analysis Volume [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	22	22		89	77	77	89	81	81
g / C, Green / Cycle	0.18	0.18		0.74	0.64	0.64	0.74	0.68	0.68
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17		0.04	0.39	0.39	0.34	0.40	0.40
s, saturation flow rate [veh/h]	1722	1510		442	1870	1836	521	1870	1852
c, Capacity [veh/h]	314	275		338	1203	1182	389	1267	1255
d1, Uniform Delay [s]	42.21	48.15		7.22	12.48	12.54	10.89	10.39	10.43
k, delay calibration	0.04	0.24		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	22.11		0.26	2.26	2.35	3.76	2.03	2.07
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.28	0.92		0.05	0.61	0.61	0.45	0.59	0.59
d, Delay for Lane Group [s/veh]	42.39	70.26		7.49	14.74	14.89	14.65	12.42	12.51
Lane Group LOS	D	E		A	B	B	B	B	B
Critical Lane Group	No	Yes		No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.25	9.09		0.12	11.48	11.43	1.53	10.51	10.52
50th-Percentile Queue Length [ft]	56.17	227.33		2.94	286.93	285.66	38.26	262.67	262.97
95th-Percentile Queue Length [veh]	4.04	14.04		0.21	17.03	16.97	2.75	15.82	15.84
95th-Percentile Queue Length [ft]	101.11	350.96		5.30	425.82	424.26	68.87	395.57	395.95

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	42.39	70.26	70.26	0.00	0.00	0.00	7.49	14.81	14.89	14.65	12.46	12.51
Movement LOS	D	E	E				A	B	B	B	B	B
d_A, Approach Delay [s/veh]	63.13			0.00			14.73			12.69		
Approach LOS	E			A			B			B		
d_I, Intersection Delay [s/veh]	18.49											
Intersection LOS	B											
Intersection V/C	0.594											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	37.49	142.35	386.92	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.307	1.500	2.901	2.959
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	2.121	4.132	2.768	2.937
Bicycle LOS	B	D	C	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	714	637	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	714	637	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	179	159	1
Total Analysis Volume [veh/h]	5	2	1	714	637	4
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.62	12.93	8.89	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh]	0.10	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft]	2.45	0.33	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.14		0.01		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	D					

**Intersection Level Of Service Report**  
**Intersection 34: 20th Place & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

**Intersection Setup**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵			↵↵			↵↵↵			↵↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	20th Place			20th Place			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	27	11	1	6	4	280	14	25	355	8
Total Analysis Volume [veh/h]	56	0	106	43	3	24	16	1120	55	100	1420	30
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			5			5			5		



**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	60.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	7	0	5	7	0
Maximum Green [s]	0	30	0	0	30	0	15	30	0	15	30	0
Amber [s]	0.0	3.6	0.0	0.0	3.6	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	14	72	0	14	72	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	20	0	0	17	0	0	17	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	2.6	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No			No		No	Yes		No	Yes	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60	2.60	2.60	0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	18	18	18	18	93	83	83	93	86	86
g / C, Green / Cycle	0.15	0.15	0.15	0.15	0.77	0.69	0.69	0.77	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.04	0.07	0.03	0.02	0.04	0.32	0.32	0.17	0.39	0.39
s, saturation flow rate [veh/h]	1336	1497	1256	1531	438	1870	1832	582	1870	1853
c, Capacity [veh/h]	216	225	144	230	363	1298	1272	472	1341	1329
d1, Uniform Delay [s]	48.85	46.59	54.06	44.07	5.13	8.21	8.23	4.79	7.85	7.87
k, delay calibration	0.04	0.04	0.04	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.57	0.42	0.08	0.23	1.16	1.19	1.02	1.58	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.47	0.30	0.12	0.04	0.46	0.46	0.21	0.54	0.54
d, Delay for Lane Group [s/veh]	49.08	47.16	54.48	44.15	5.36	9.36	9.42	5.81	9.42	9.47
Lane Group LOS	D	D	D	D	A	A	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.57	2.94	1.27	0.70	0.10	6.75	6.67	0.63	8.36	8.35
50th-Percentile Queue Length [ft/ln]	39.15	73.40	31.82	17.60	2.47	168.74	166.73	15.77	209.10	208.87
95th-Percentile Queue Length [veh/ln]	2.82	5.28	2.29	1.27	0.18	11.01	10.90	1.14	13.11	13.09
95th-Percentile Queue Length [ft/ln]	70.47	132.12	57.28	31.69	4.44	275.26	272.61	28.39	327.68	327.37

**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	49.08	47.16	47.16	54.48	44.15	44.15	5.36	9.39	9.42	5.81	9.45	9.47
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	47.82			50.50			9.34			9.21		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	12.34											
Intersection LOS	B											
Intersection V/C	0.464											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	334.36	499.36	545.21	454.56
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.159	2.008	2.918	2.925
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	490	490	1123	1123
d_b, Bicycle Delay [s]	34.29	34.29	11.56	11.56
I_b,int, Bicycle LOS Score for Intersection	1.827	1.675	2.542	2.838
Bicycle LOS	A	A	B	C

**Sequence**

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 35: 20th Place & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	36.0
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.195

**Intersection Setup**

Name	20th Place		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↑		↑	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	20th Place		Broadway		Broadway	
Base Volume Input [veh/h]	28	42	0	680	738	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	42	0	680	738	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	11	0	170	185	0
Total Analysis Volume [veh/h]	28	42	0	680	738	0
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.19	0.11	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	35.98	15.08	0.00	0.00	0.00	0.00
Movement LOS	E	C		A	A	
95th-Percentile Queue Length [veh/ln]	0.69	0.35	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	17.30	8.75	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.44		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.10					
Intersection LOS	E					

**Intersection Level Of Service Report**  
**Intersection 39: 22nd Street & Santa Monica Boulevard**

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

**Intersection Setup**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			Yes			Yes		

**Volumes**

Name	22nd Street			22nd Street			Santa Monica Boulevard			Santa Monica Boulevard		
Base Volume Input [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	0	63	0	0	0	4	347	15	44	366	8
Total Analysis Volume [veh/h]	87	0	253	0	0	0	16	1389	60	176	1462	32
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	10			10			10			10		
v_di, Inbound Pedestrian Volume crossing	10			10			10			10		
v_co, Outbound Pedestrian Volume crossing	10			10			10			10		
v_ci, Inbound Pedestrian Volume crossing	10			10			10			10		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	5			0			5			5		

**Intersection Settings**

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

**Phasing & Timing**

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal group	0	8	0	0	0	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	0	0	7	7	0	7	7	0
Maximum Green [s]	0	25	0	0	0	0	30	30	0	30	30	0
Amber [s]	0.0	3.6	0.0	0.0	0.0	0.0	3.6	3.6	0.0	3.6	3.6	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	30	0	0	0	0	12	78	0	12	78	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0	7	0	0	0	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	20	0	0	0	0	0	17	0	0	17	0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.6	0.0	0.0	0.0	0.0	2.6	2.6	0.0	2.6	2.6	0.0
Minimum Recall		No					No	Yes		No	Yes	
Maximum Recall		No					No	No		No	No	
Pedestrian Recall		No					No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

**Exclusive Pedestrian Phase**

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

**Lane Group Calculations**

Lane Group	L	C		L	C	C	L	C	C
C, Cycle Length [s]	120	120		120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.60	4.60		4.60	4.60	4.60	4.60	4.60	4.60
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.60	2.60		0.00	2.60	2.60	0.00	2.60	2.60
g_i, Effective Green Time [s]	23	23		88	76	76	88	80	80
g / C, Green / Cycle	0.19	0.19		0.73	0.63	0.63	0.73	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.05	0.17		0.04	0.39	0.39	0.34	0.40	0.40
s, saturation flow rate [veh/h]	1726	1513		443	1870	1836	523	1870	1852
c, Capacity [veh/h]	333	292		332	1184	1162	383	1247	1236
d1, Uniform Delay [s]	41.13	46.90		7.76	13.22	13.29	11.64	11.08	11.12
k, delay calibration	0.04	0.24		0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.15	15.27		0.27	2.40	2.49	3.94	2.14	2.19
d3, Initial Queue Delay [s]	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00

**Lane Group Results**

X, volume / capacity	0.26	0.87		0.05	0.62	0.62	0.46	0.60	0.60
d, Delay for Lane Group [s/veh]	41.29	62.18		8.04	15.62	15.78	15.58	13.22	13.31
Lane Group LOS	D	E		A	B	B	B	B	B
Critical Lane Group	No	Yes		No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.21	8.53		0.12	11.92	11.87	1.61	10.97	10.98
50th-Percentile Queue Length [ft/ln]	55.34	213.28		3.10	298.12	296.83	40.27	274.24	274.56
95th-Percentile Queue Length [veh/ln]	3.98	13.32		0.22	17.59	17.52	2.90	16.40	16.42
95th-Percentile Queue Length [ft/ln]	99.61	333.03		5.57	439.71	438.11	72.49	410.03	410.43



**Movement, Approach, & Intersection Results**

d_M, Delay for Movement [s/veh]	41.29	62.18	62.18	0.00	0.00	0.00	8.04	15.70	15.78	15.58	13.26	13.31
Movement LOS	D	E	E				A	B	B	B	B	B
d_A, Approach Delay [s/veh]	56.83			0.00			15.62			13.51		
Approach LOS	E			A			B			B		
d_I, Intersection Delay [s/veh]	18.63											
Intersection LOS	B											
Intersection V/C	0.594											

**Other Modes**

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft <sup>2</sup> /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft <sup>2</sup> /ped]	40.67	142.77	386.92	0.00
d_p, Pedestrian Delay [s]	49.50	49.50	49.50	49.50
I_p,int, Pedestrian LOS Score for Intersection	2.304	1.500	2.901	2.959
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	423	0	1223	1223
d_b, Bicycle Delay [s]	37.38	60.00	9.07	9.07
I_b,int, Bicycle LOS Score for Intersection	2.121	4.132	2.768	2.937
Bicycle LOS	B	D	C	C

**Sequence**

Ring 1	1	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**Intersection Level Of Service Report  
Intersection 40: 22nd Street & Broadway**

Control Type:	Two-way stop	Delay (sec / veh):	28.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.032

**Intersection Setup**

Name	22nd Street		Broadway		Broadway	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

**Volumes**

Name	22nd Street		Broadway		Broadway	
Base Volume Input [veh/h]	5	2	1	714	637	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	2	1	714	637	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	179	159	1
Total Analysis Volume [veh/h]	5	2	1	714	637	4
Pedestrian Volume [ped/h]	10		10		10	

**Intersection Settings**

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

**Movement, Approach, & Intersection Results**

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.62	12.93	8.89	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.45	0.33	0.08	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.14		0.01		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.13					
Intersection LOS	D					



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**58**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** 26th St  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** San Vicente Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	93	1	93	126	1	126
	Left-Through		0			0	
	Through	150	1	150	340	1	340
	Through-Right		0			0	
	Right	124	1	50	161	1	88
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	290	1	290	220	1	220
	Left-Through		0			0	
	Through	250	1	250	260	1	260
	Through-Right		0			0	
	Right	150	1	100	120	1	75
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	100	1	100	90	1	90
	Left-Through		0			0	
	Through	864	2	432	717	2	359
	Through-Right		0			0	
	Right	96	1	50	74	1	11
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	148	1	148	146	1	146
	Left-Through		0			0	
	Through	836	2	418	784	2	392
	Through-Right		0			0	
	Right	180	1	35	280	1	170
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 440			<i>North-South:</i> 600
				<i>East-West:</i> 580			<i>East-West:</i> 505
				<b>SUM:</b> 1020			<b>SUM:</b> 1105
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.742			0.804
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.642</b>			<b>0.704</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**68**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Berkeley St  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 2	<i>WB--</i> 2	2	<i>EB--</i> 2	<i>WB--</i> 2	2
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	20	0	20	20	0	20
	Left-Through		1			1	
	Through	110	0	130	90	0	110
	Through-Right		0			0	
	Right	10	1	0	30	1	15
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	180	0	180	100	0	100
	Left-Through		1			1	
	Through	80	0	260	110	0	210
	Through-Right		0			0	
	Right	20	1	5	50	1	25
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	30	1	30	50	1	50
	Left-Through		0			0	
	Through	1110	1	560	1277	1	644
	Through-Right		1			1	
	Right	10	0	10	10	0	10
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	30	1	30	30	1	30
	Left-Through		0			0	
	Through	1384	1	727	1343	1	717
	Through-Right		1			1	
	Right	70	0	70	90	0	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		310	<i>North-South:</i>		230
		<i>East-West:</i>		757	<i>East-West:</i>		767
		<i>SUM:</i>		1067	<i>SUM:</i>		997
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.711			0.665
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.611</b>			<b>0.565</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



# Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**69**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	160	1	160	240	1	240
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	120	1	120	100	1	100
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1180	1	650	1457	1	779
	↗ Through-Right		1			1	
	↘ Right	120	0	120	100	0	100
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	70	1	70	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1394	2	697	1373	2	687
	↗ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↵↔↗ Left-Through-Right		0			0	
	↵↔↘ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 160			<i>North-South:</i> 240
				<i>East-West:</i> 720			<i>East-West:</i> 859
				<b>SUM:</b> 880			<b>SUM:</b> 1099
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.587			0.733
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.487</b>			<b>0.633</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**70**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2 0 0 0 2 0			2 0 0 0 2 0
		<b>NB--</b> 2 <b>EB--</b> 0		<b>SB--</b> 0 <b>WB--</b> 0	<b>NB--</b> 2 <b>EB--</b> 0		<b>SB--</b> 0 <b>WB--</b> 0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	129	0	129	102	0	102
	Left-Through		0			0	
	Through	290	0	469	400	0	582
	Through-Right		0			0	
	Right	50	0	0	80	0	0
	Left-Through-Right			1		1	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	30	0	30	40	0	40
	Left-Through		0			0	
	Through	210	0	290	270	0	360
	Through-Right		0			0	
	Right	50	0	0	50	0	0
	Left-Through-Right			1		1	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	20	1	20	20	1	20
	Left-Through		0			0	
	Through	764	1	431	1096	1	602
	Through-Right		1			1	
	Right	97	0	97	107	0	107
	Left-Through-Right			0		0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	80	1	80	40	1	40
	Left-Through		0			0	
	Through	1366	1	708	1068	1	554
	Through-Right		1			1	
	Right	50	0	50	40	0	40
	Left-Through-Right			0		0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 499 <i>East-West:</i> 728 <i>SUM:</i> 1227			<i>North-South:</i> 622 <i>East-West:</i> 642 <i>SUM:</i> 1264
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.818			0.843
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.718</b>			<b>0.743</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**71**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Broadway

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	70	0	70	70	0	70
	↵↔ Left-Through		0			0	
	→ Through	419	0	539	512	0	642
	↵↔ Through-Right		0			0	
	↵ Right	50	0	0	60	0	0
	↵↔ Left-Through-Right		1			1	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	10	0	10	20	0	20
	↵↔ Left-Through		0			0	
	→ Through	377	0	407	407	0	447
	↵↔ Through-Right		0			0	
	↵ Right	20	0	0	20	0	0
	↵↔ Left-Through-Right		1			1	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	20	1	20	30	1	30
	↵↔ Left-Through		0			0	
	→ Through	189	0	309	366	0	456
	↵↔ Through-Right		1			1	
	↵ Right	120	0	0	90	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	40	1	40	30	1	30
	↵↔ Left-Through		0			0	
	→ Through	214	1	214	140	1	140
	↵↔ Through-Right		0			0	
	↵ Right	20	1	20	30	1	30
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 549			<i>North-South:</i> 662
				<i>East-West:</i> 349			<i>East-West:</i> 486
				<b>SUM:</b> 898			<b>SUM:</b> 1148
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.599			0.765
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.499</b>			<b>0.665</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>B</b>





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**72**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (west)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	577	2	317	797	2	438
	↵↔ Left-Through		0			0	
	→ Through	10	0	70	10	0	120
	↵↔ Through-Right		1			1	
	↵ Right	60	0	0	110	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	30	1	30	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1039	1	525	1229	1	620
	↵↔ Through-Right		1			1	
	↵ Right	10	0	10	10	0	10
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	10	1	10	10	1	10
	↵↔ Left-Through		0			0	
	→ Through	1545	2	773	1402	2	701
	↵↔ Through-Right		0			0	
	↵ Right	719	1	402	692	1	254
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 317			<i>North-South:</i> 438
				<i>East-West:</i> 803			<i>East-West:</i> 761
				<b>SUM:</b> 1120			<b>SUM:</b> 1199
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.747			0.799
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.647</b>			<b>0.699</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>B</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**73**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd (east)  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				1			1
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 3	WB-- 0	0	EB-- 3	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	771	1	486	508	1	334
	↵↔ Left-Through		0			0	
	→ Through	0	0	486	0	0	334
	↘ Through-Right		0			0	
	↘ Right	200	0	0	160	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↘ Through-Right		0			0	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		1			1	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	1	0	0	1	0
	↵↔ Left-Through		0			0	
	→ Through	1269	3	423	1443	3	481
	↘ Through-Right		0			0	
	↘ Right	317	1	0	593	1	259
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	150	1	150	60	1	60
	↵↔ Left-Through		0			0	
	→ Through	1483	2	494	1585	2	528
	↘ Through-Right		1			1	
	↘ Right	0	0	0	0	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 486			<i>North-South:</i> 334
				<i>East-West:</i> 573			<i>East-West:</i> 541
				<b>SUM:</b> 1059			<b>SUM:</b> 875
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.743			0.614
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.643</b>			<b>0.514</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**74**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Centinela Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 WB Ramps

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 2	<b>SB--</b> 2	2	<b>NB--</b> 2	<b>SB--</b> 2	2
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 0	0	<b>EB--</b> 3	<b>WB--</b> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	410	1	410	410	1	410
	Left-Through		0			0	
	Through	530	1	530	240	1	240
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	347	1	347	633	1	633
	Through-Right		0			0	
	Right	80	1	80	80	1	80
	Left-Through-Right		0			0	
<b>EASTBOUND</b>	Left	611	1	611	338	1	338
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	340	1	0	290	1	0
	Left-Through-Right		0			0	
<b>WESTBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	0	0	0	0	0	0
	Through-Right		0			0	
	Right	0	0	0	0	0	0
	Left-Through-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 757 <i>East-West:</i> 611 <i>SUM:</i> 1368			<i>North-South:</i> 1043 <i>East-West:</i> 338 <i>SUM:</i> 1381
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.960			0.969
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.860</b>			<b>0.869</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**75**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Texas Ave

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	0	70	10	0	10
	Left-Through		1			1	
	Through	861	0	581	874	0	497
	Through-Right		1			1	
	Right	20	0	581	80	0	497
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	20	0	20	70	0	70
	Left-Through		1			1	
	Through	779	0	435	794	0	547
	Through-Right		1			1	
	Right	10	0	435	20	0	547
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	30	0	30	30	0	30
	Left-Through		0			0	
	Through	100	0	212	280	0	384
	Through-Right		0			0	
	Right	82	0	0	74	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	80	0	80	60	0	60
	Left-Through		0			0	
	Through	110	0	240	90	0	190
	Through-Right		0			0	
	Right	50	0	0	40	0	0
	Left-Through-Right		1			1	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		601	<i>North-South:</i>		567
		<i>East-West:</i>		292	<i>East-West:</i>		444
		<i>SUM:</i>		893	<i>SUM:</i>		1011
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.595			0.674
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.495</b>			<b>0.574</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**76**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				4			4
		0		0	0		0
		0		0	0		0
		2		2	2		2
		0		0	0		0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	190	1	190	150	1	150
	↵↔ Left-Through		0			0	
	→ Through	640	1	391	710	1	407
	↘ Through-Right		1			1	
	↘ Right	141	0	141	104	0	104
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	650	1	370	660	1	360
	↘ Through-Right		1			1	
	↘ Right	90	0	90	60	0	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	70	1	70	110	1	110
	↵↔ Left-Through		0			0	
	→ Through	1300	2	650	837	2	419
	↘ Through-Right		0			0	
	↘ Right	80	1	0	80	1	5
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	149	1	149	184	1	184
	↵↔ Left-Through		0			0	
	→ Through	1434	2	717	1273	2	637
	↘ Through-Right		0			0	
	↘ Right	80	1	25	100	1	65
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 560			<i>North-South:</i> 510
				<i>East-West:</i> 799			<i>East-West:</i> 747
				<b>SUM:</b> 1359			<b>SUM:</b> 1257
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.988			0.914
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.888</b>			<b>0.814</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**77**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>No. of Phases</b> Opposed Ø'ing: N/S-1, E/W-2 or Both-3? Right Turns: FREE-1, NRTOR-2 or OLA-3? ATSAC-1 or ATSAC+ATCS-2? Override Capacity				2			2
				0			0
		<i>NB--</i> 0		<i>SB--</i> 0	<i>NB--</i> 0	<i>SB--</i> 0	0
		<i>EB--</i> 0		<i>WB--</i> 0	<i>EB--</i> 0	<i>WB--</i> 0	0
				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	82	1	82	119	1	119
	↵↔ Left-Through		0			0	
	→ Through	930	2	465	1143	2	572
	↘ Through-Right		0			0	
	↘ Right	70	1	70	120	1	120
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	60	1	60	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	920	1	481	867	1	459
	↘ Through-Right		1			1	
	↘ Right	42	0	42	51	0	51
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	51	1	51	72	1	72
	↵↔ Left-Through		0			0	
	→ Through	709	1	427	1085	1	593
	↘ Through-Right		1			1	
	↘ Right	145	0	145	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	1092	2	394	899	2	326
	↘ Through-Right		1			1	
	↘ Right	90	0	90	80	0	80
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 563 <i>East-West:</i> 445 <i>SUM:</i> 1008			<i>North-South:</i> 612 <i>East-West:</i> 593 <i>SUM:</i> 1205
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.672			0.803
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.572</b>			<b>0.703</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>A</b>			<b>C</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**78**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ohio Ave

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<i>NB--</i> 0	<i>SB--</i> 0	0	<i>NB--</i> 0	<i>SB--</i> 0	0
ATSAC-1 or ATSAC+ATCS-2?		<i>EB--</i> 0	<i>WB--</i> 0	0	<i>EB--</i> 0	<i>WB--</i> 0	0
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	70	1	70	60	1	60
	Left-Through		0			0	
	Through	1013	2	358	1225	2	425
	Through-Right		1			1	
	Right	60	0	60	50	0	50
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	0	0	0	0	0	0
	Left-Through		0			0	
	Through	1040	1	567	917	1	499
	Through-Right		1			1	
	Right	94	0	94	80	0	80
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	59	1	59	126	1	126
	Left-Through		0			0	
	Through	180	0	280	250	0	390
	Through-Right		1			1	
	Right	100	0	0	140	0	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	170	1	170	100	1	100
	Left-Through		0			0	
	Through	220	1	220	70	1	70
	Through-Right		0			0	
	Right	10	1	10	10	1	10
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 637			<i>North-South:</i> 559
				<i>East-West:</i> 450			<i>East-West:</i> 490
				<i>SUM:</i> 1087			<i>SUM:</i> 1049
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.725			0.699
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.625</b>			<b>0.599</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>B</b>			<b>A</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**79**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Olympic Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		<b>NB--</b> 3	<b>SB--</b> 1	1	<b>NB--</b> 3	<b>SB--</b> 1	1
ATSAC-1 or ATSAC+ATCS-2?		<b>EB--</b> 3	<b>WB--</b> 3	3	<b>EB--</b> 3	<b>WB--</b> 3	3
Override Capacity				2			2
				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	Left	338	1	338	184	1	184
	Left-Through		0			0	
	Through	1222	2	611	1299	2	650
	Through-Right		0			0	
	Right	230	1	114	110	1	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>SOUTHBOUND</b>	Left	140	1	140	60	1	60
	Left-Through		0			0	
	Through	1027	2	514	1004	2	502
	Through-Right		0			0	
	Right	163	1	0	103	1	0
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>EASTBOUND</b>	Left	172	1	172	166	1	166
	Left-Through		0			0	
	Through	878	3	293	1073	3	358
	Through-Right		0			0	
	Right	120	1	0	304	1	120
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>WESTBOUND</b>	Left	210	2	116	320	2	176
	Left-Through		0			0	
	Through	1252	3	417	1228	3	409
	Through-Right		0			0	
	Right	110	1	0	150	1	90
	Left-Through-Right		0			0	
	Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<b>North-South:</b> 852			<b>North-South:</b> 710
				<b>East-West:</b> 589			<b>East-West:</b> 575
				<b>SUM:</b> 1441			<b>SUM:</b> 1285
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.048			0.935
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				0.948			0.835
<b>LEVEL OF SERVICE (LOS):</b>				E			D





## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**80**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Ocean Park Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				4			4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 3	SB-- 0	0	NB-- 3	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 3	3	EB-- 0	WB-- 3	3
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	850	1	850	320	1	320
	↵↔ Left-Through		0			0	
	→ Through	1660	1	855	1038	1	589
	↘ Through-Right		1			1	
	↘ Right	50	0	50	140	0	140
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	30	1	30	50	1	50
	↵↔ Left-Through		0			0	
	→ Through	776	2	388	1495	2	748
	↘ Through-Right		0			0	
	↘ Right	270	1	250	170	1	150
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	40	1	40	40	1	40
	↵↔ Left-Through		0			0	
	→ Through	330	2	165	700	2	350
	↘ Through-Right		0			0	
	↘ Right	250	1	0	940	1	780
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	50	1	50	30	1	30
	↵↔ Left-Through		0			0	
	→ Through	450	1	255	340	1	185
	↘ Through-Right		1			1	
	↘ Right	60	0	60	30	0	30
	↵↔↘ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 1238			<i>North-South:</i> 1068
				<i>East-West:</i> 295			<i>East-West:</i> 810
				<i>SUM:</i> 1533			<i>SUM:</i> 1878
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.115			1.366
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>1.015</b>			<b>1.266</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>F</b>			<b>F</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**81**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Bundy Dr  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** I-10 EB On-Ramp

**Analyst:** Fehr & Peers      **Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 2	SB-- 0	0	NB-- 2	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	2020	2	1010	988	2	494
	↵↔ Through-Right		0			0	
	↵ Right	860	1	860	380	1	380
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵↔ Left	697	1	697	758	1	758
	↵↔ Left-Through		0			0	
	→ Through	1636	2	818	1755	2	878
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	0	0	0	0	0	0
	↵↔ Left-Through		0			0	
	→ Through	0	0	0	0	0	0
	↵↔ Through-Right		0			0	
	↵ Right	0	0	0	0	0	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				North-South: 1707			North-South: 1252
				East-West: 0			East-West: 0
				SUM: 1707			SUM: 1252
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				1.138			0.835
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				1.038			0.735
<b>LEVEL OF SERVICE (LOS):</b>				F			C



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**82**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Wilshire Blvd

**Analyst:** Fehr & Peers **Date:** 2018

		AM			PM		
No. of Phases				3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 1	1	NB-- 0	SB-- 1	1
		EB-- 1	WB-- 0	0	EB-- 1	WB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	180	1	180	120	1	120
	↵↔ Left-Through		0			0	
	→ Through	370	2	185	400	2	200
	↵↔ Through-Right		0			0	
	↵ Right	93	1	47	148	1	100
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	90	1	90	100	1	100
	↵↔ Left-Through		0			0	
	→ Through	320	1	225	460	1	285
	↵↔ Through-Right		1			1	
	↵ Right	130	0	130	110	0	110
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	80	1	80	120	1	120
	↵↔ Left-Through		0			0	
	→ Through	1691	2	846	1761	2	881
	↵↔ Through-Right		0			0	
	↵ Right	70	1	0	130	1	0
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	93	1	93	96	1	96
	↵↔ Left-Through		0			0	
	→ Through	1574	2	787	1147	2	574
	↵↔ Through-Right		0			0	
	↵ Right	60	1	15	70	1	20
	↵↔ Left-Through-Right		0			0	
	↵↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>				<i>North-South:</i> 405			<i>North-South:</i> 405
				<i>East-West:</i> 939			<i>East-West:</i> 977
				<i>SUM:</i> 1344			<i>SUM:</i> 1382
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.943			0.970
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.843</b>			<b>0.870</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>D</b>			<b>D</b>



## Level of Service Worksheet (Circular 212 Method)



**I/S #:**  
**83**

**PROJECT TITLE:** St John's Hospital Phase II  
**North-South Street:** Barrington Ave  
**Scenario:** Future Year plus Project  
**Count Date:** 1/0/1900

**East-West Street:** Santa Monica Blvd  
**Analyst:** Fehr & Peers  
**Date:** 2018

		AM			PM		
		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
No. of Phases				2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?		NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0
ATSAC-1 or ATSAC+ATCS-2?		EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0
Override Capacity				2			2
Override Capacity				0			0
MOVEMENT		Volume	No. of Lanes	Lane Volume	Volume	No. of Lanes	Lane Volume
<b>NORTHBOUND</b>	↵ Left	100	1	100	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	520	1	520	490	1	490
	↘ Through-Right		0			0	
	↘ Right	90	1	35	100	1	60
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>SOUTHBOUND</b>	↵ Left	110	1	110	70	1	70
	↵↔ Left-Through		0			0	
	→ Through	480	0	583	460	0	526
	↘ Through-Right		1			1	
	↘ Right	103	0	0	66	0	0
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>EASTBOUND</b>	↵ Left	103	1	103	148	1	148
	↵↔ Left-Through		0			0	
	→ Through	946	2	339	1116	2	405
	↘ Through-Right		1			1	
	↘ Right	70	0	70	100	0	100
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>WESTBOUND</b>	↵ Left	110	1	110	80	1	80
	↵↔ Left-Through		0			0	
	→ Through	1267	2	442	994	2	368
	↘ Through-Right		1			1	
	↘ Right	60	0	60	110	0	110
	↘↔ Left-Through-Right		0			0	
	↘↔ Left-Right		0			0	
<b>CRITICAL VOLUMES</b>		<i>North-South:</i>		683	<i>North-South:</i>		596
		<i>East-West:</i>		545	<i>East-West:</i>		516
		<b>SUM:</b>		1228	<b>SUM:</b>		1112
<b>VOLUME/CAPACITY (V/C) RATIO:</b>				0.819			0.741
<b>V/C LESS ATSAC/ATCS ADJUSTMENT:</b>				<b>0.719</b>			<b>0.641</b>
<b>LEVEL OF SERVICE (LOS):</b>				<b>C</b>			<b>B</b>