

TECHNICAL APPENDICES
EDCO EXPANSION PROJECT
La Mesa, California
November 23, 2021

LLG Ref. 3-21-3443

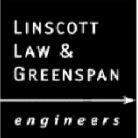
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APPENDICES

- A. Intersection Manual Count Sheets
- B. SANDAG Series 14 Year 2016 VMT Travel Demand Model Results
- C. Peak Hour Intersection Analysis Worksheets – Existing
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APPENDIX A
INTERSECTION MANUAL COUNT SHEETS

Intersection Turning Movement - Peak Hour Vehicle Count



Location: #01	File Name: ITM-21-056-01
Intersection: Spring St & I-8 Ramps	Project: LLG Ref. 3--21-3443
Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Spring Street Southbound			I-8 EB On Ramp Westbound			Spring Street Northbound			I-8 EB Off Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	13	18	0	0	0	0	0	206	19	10	1	0	267
7:15	11	19	0	0	0	0	0	261	37	17	1	0	346
7:30	9	32	0	0	0	0	0	175	54	24	0	0	294
7:45	12	46	0	0	0	0	0	194	63	22	0	0	337
8:00	15	43	0	0	0	0	0	180	75	23	1	0	337
8:15	22	40	0	0	0	0	0	179	58	16	0	1	316
8:30	20	26	0	0	0	0	0	183	45	25	0	0	299
8:45	20	30	0	0	0	0	0	185	35	31	0	0	301
Total	122	254	0	0	0	0	0	1563	386	168	3	1	2497
Approach%	32.4	67.6	-	-	-	-	-	80.2	19.8	97.7	1.7	0.6	
Total%	4.9	10.2	-	-	-	-	-	62.6	15.5	6.7	0.1	0.0	

AM Intersection Peak Hour: 07:15 to 08:15

Volume	47	140	-	-	-	-	-	810	229	86	2	-	1,314
Approach%	25.1	74.9	-	-	-	-	-	78.0	22.0	97.7	2.3	-	
Total%	3.6	10.7	-	-	-	-	-	61.6	17.4	6.5	0.2	-	
PHF			0.81			#DIV/0!			0.87			0.92	0.95

PM	Spring Street Southbound			I-8 EB On Ramp Westbound			Spring Street Northbound			I-8 EB Off Ramp Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	43	50	0	0	0	0	0	167	72	19	4	0	355
16:15	21	61	0	0	0	0	0	139	54	17	0	1	293
16:30	28	73	0	0	0	0	0	142	44	13	0	0	300
16:45	34	74	0	0	0	0	0	153	52	29	2	2	346
17:00	35	67	0	0	0	0	0	208	73	10	1	1	395
17:15	20	54	0	0	0	0	0	137	60	12	0	0	283
17:30	26	55	0	0	0	0	0	132	62	20	1	1	297
17:45	16	44	0	0	0	0	0	97	53	9	0	1	220
Total	223	478	0	0	0	0	0	1175	470	129	8	6	2489
Approach%	31.8	68.2	-	-	-	-	-	71.4	28.6	90.2	5.6	4.2	
Total%	9.0	19.2	-	-	-	-	-	47.2	18.9	5.2	0.3	0.2	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	118	275	-	-	-	-	-	642	223	69	3	4	1,334
Approach%	30.0	70.0	-	-	-	-	-	74.2	25.8	90.8	3.9	5.3	
Total%	8.8	20.6	-	-	-	-	-	48.1	16.7	5.2	0.2	0.3	
PHF			0.91			#DIV/0!			0.77			0.58	0.84

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #01	File Name: ITM-21-056-01
	Intersection: Spring St & I-8 Ramps	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Spring Street Southbound				I-8 EB On Ramp Westbound				Spring Street Northbound				I-8 EB Off Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	0				2				1				0				3	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

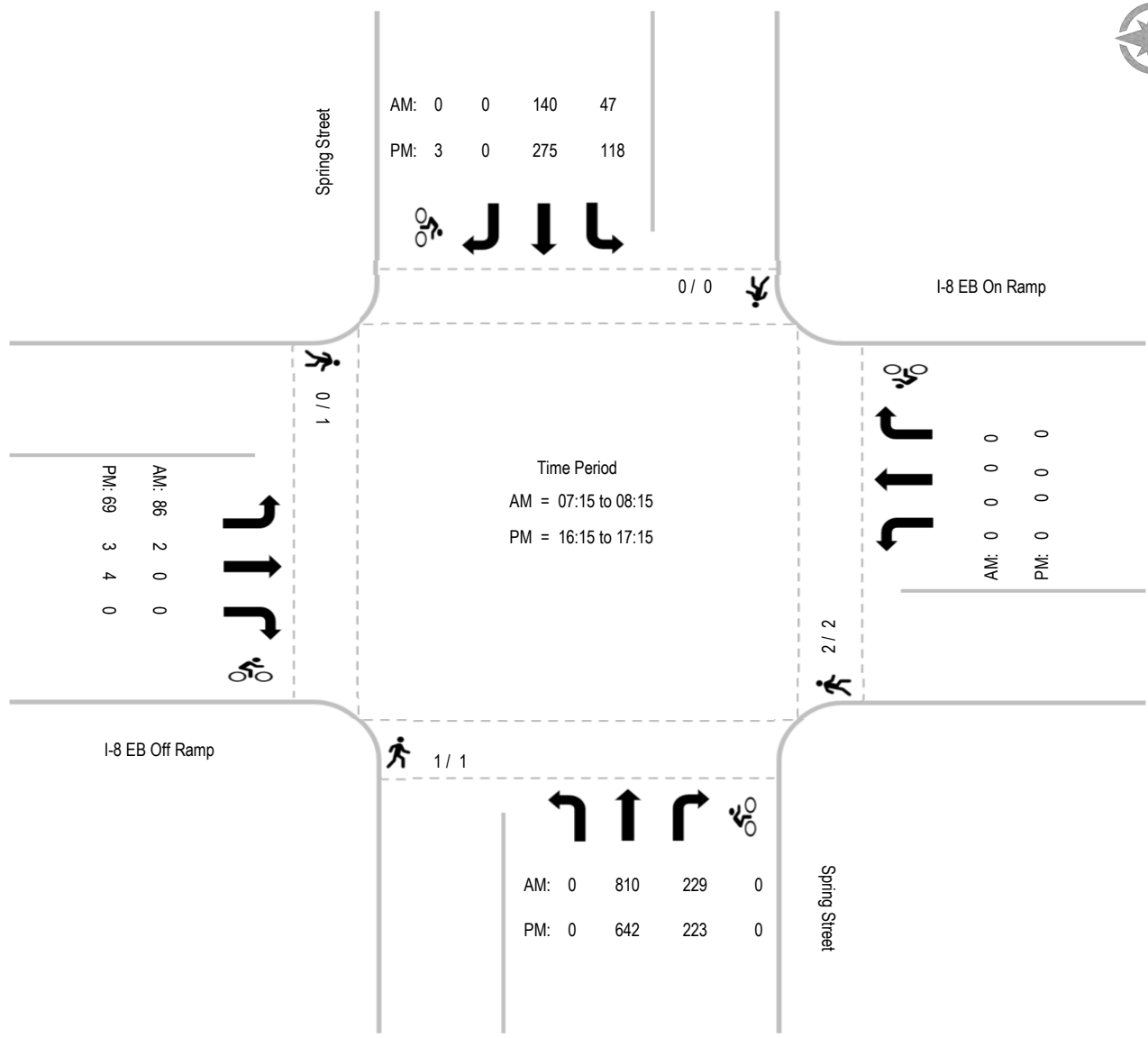
PM	Spring Street Southbound				I-8 EB On Ramp Westbound				Spring Street Northbound				I-8 EB Off Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	3	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
Ped Total	0				2				1				1				4	
Bike Total		0	3	0		0	0	0		0	0	0		0	0	0		3

Intersection Turning Movement - Peak Hour Summary



Location: #01
 Intersection: Spring St & I-8 Ramps
 Date of Count: Wednesday, September 22, 2021

File Name: ITM-21-056-01
 Project: LLG Ref. 3--21-3443
 EDCO Expansion La Mesa



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #02	File Name: ITM-21-056-02
	Intersection: Spring Street & University Avenue	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Spring Street Southbound			University Avenue Westbound			Spring Street Northbound			University Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	16	39	13	4	10	39	42	182	1	25	11	15	397
7:15	13	38	22	5	23	50	31	200	5	31	14	23	455
7:30	12	49	24	7	38	53	43	176	0	28	17	24	471
7:45	24	69	22	5	28	41	42	169	10	18	17	36	481
8:00	16	72	27	10	30	49	40	168	9	31	29	36	517
8:15	21	74	23	4	21	46	35	157	7	38	21	23	470
8:30	16	60	15	4	23	54	40	164	14	37	19	35	481
8:45	19	59	6	11	21	47	37	137	6	38	22	31	434
Total	137	460	152	50	194	379	310	1353	52	246	150	223	3706
Approach%	18.3	61.4	20.3	8.0	31.1	60.8	18.1	78.9	3.0	39.7	24.2	36.0	
Total%	3.7	12.4	4.1	1.3	5.2	10.2	8.4	36.5	1.4	6.6	4.0	6.0	

AM Intersection Peak Hour: 07:45 to 08:45

Volume	77	275	87	23	102	190	157	658	40	124	86	130	1,949
Approach%	17.5	62.6	19.8	7.3	32.4	60.3	18.4	77.0	4.7	36.5	25.3	38.2	
Total%	4.0	14.1	4.5	1.2	5.2	9.7	8.1	33.8	2.1	6.4	4.4	6.7	
PHF			0.93			0.88			0.97			0.89	0.94

PM	Spring Street Southbound			University Avenue Westbound			Spring Street Northbound			University Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	27	143	24	16	10	48	30	142	6	41	33	60	580
16:15	34	187	26	10	35	35	30	121	6	26	20	50	580
16:30	27	110	18	15	39	38	31	117	5	38	28	56	522
16:45	49	210	33	15	27	34	27	134	6	34	27	57	653
17:00	29	163	23	11	31	59	41	169	2	43	32	69	672
17:15	29	137	30	6	27	31	21	134	5	39	22	52	533
17:30	27	184	18	12	29	31	36	119	0	47	17	64	584
17:45	18	114	16	8	32	26	38	97	2	29	14	61	455
Total	240	1248	188	93	230	302	254	1033	32	297	193	469	4579
Approach%	14.3	74.5	11.2	14.9	36.8	48.3	19.3	78.3	2.4	31.0	20.1	48.9	
Total%	5.2	27.3	4.1	2.0	5.0	6.6	5.5	22.6	0.7	6.5	4.2	10.2	

PM Intersection Peak Hour: 16:45 to 17:45

Volume	134	694	104	44	114	155	125	556	13	163	98	242	2,442
Approach%	14.4	74.5	11.2	14.1	36.4	49.5	18.0	80.1	1.9	32.4	19.5	48.1	
Total%	5.5	28.4	4.3	1.8	4.7	6.3	5.1	22.8	0.5	6.7	4.0	9.9	
PHF			0.80			0.77			0.82			0.87	0.91

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #02	File Name: ITM-21-056-02
	Intersection: Spring Street & University Avenue	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Spring Street Southbound				University Avenue Westbound				Spring Street Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	3	1
7:15	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	2	1
7:30	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0
7:45	2	0	4	0	0	0	1	0	0	0	0	0	0	0	2	0	2	7
8:00	1	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	6	0
8:15	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	4	0
8:30	0	0	0	0	2	0	2	0	6	0	0	0	0	0	0	0	8	2
8:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Ped Total	3				8				18				0				29	
Bike Total		0	4	0		0	5	0		0	0	0		0	2	0		11

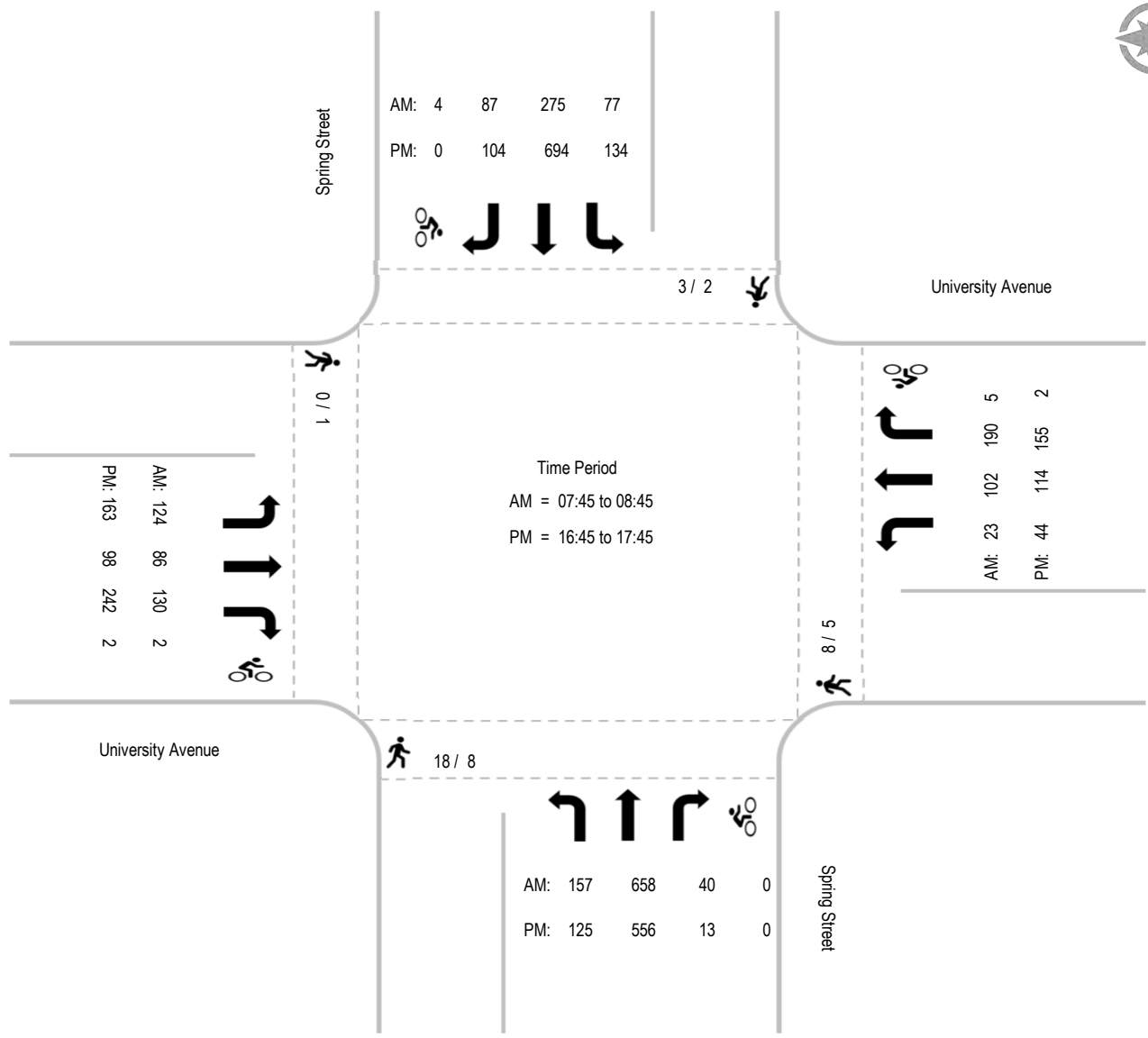
PM	Spring Street Southbound				University Avenue Westbound				Spring Street Northbound				University Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1
17:00	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	4	0
17:15	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4	0
17:30	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	1
17:45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
Ped Total	2				5				8				1				16	
Bike Total		0	0	0		0	2	0		0	0	0		0	1	1		4

Intersection Turning Movement - Peak Hour Summary

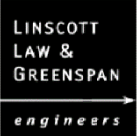


Location: #02
 Intersection: Spring Street & University Avenue
 Date of Count: Wednesday, September 22, 2021

File Name: ITM-21-056-02
 Project: LLG Ref. 3--21-3443
 EDCO Expansion La Mesa



Intersection Turning Movement - Peak Hour Vehicle Count



Location: #03	File Name: ITM-21-056-03
Intersection: Center Street & Guild Street & I-8 Ramps	Project: LLG Ref. 3--21-3443
Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Guild Street Southbound			Center Street Westbound			I-8 On/Off Ramps Northbound			Center Street Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	14	14	1	0	0	0	1	0	35	2	2	3	72
7:15	4	15	2	0	0	0	4	13	38	0	0	2	78
7:30	4	25	6	0	0	0	5	13	65	0	0	7	125
7:45	9	19	4	0	0	0	5	10	76	0	1	1	125
8:00	12	25	5	0	0	0	2	6	69	0	2	3	124
8:15	6	17	1	0	0	0	0	5	63	0	1	3	96
8:30	8	13	4	0	0	0	0	6	49	1	4	5	90
8:45	17	14	4	0	0	0	3	2	79	0	0	3	122
Total	74	142	27	0	0	0	20	55	474	3	10	27	832
Approach%	30.5	58.4	11.1	-	-	-	3.6	10.0	86.3	7.5	25.0	67.5	
Total%	8.9	17.1	3.2	-	-	-	2.4	6.6	57.0	0.4	1.2	3.2	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	31	86	16	-	-	-	12	34	273	-	4	14	470
Approach%	23.3	64.7	12.0	-	-	-	3.8	10.7	85.6	-	22.2	77.8	
Total%	6.6	18.3	3.4	-	-	-	2.6	7.2	58.1	-	0.9	3.0	
PHF			0.79			#DIV/0!			0.88			0.64	0.94

PM	Guild Street Southbound			Center Street Westbound			I-8 On/Off Ramps Northbound			Center Street Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	13	16	4	0	0	0	3	1	68	0	4	2	111
16:15	10	15	6	0	0	0	2	3	47	1	4	9	97
16:30	15	14	6	0	0	0	3	4	51	0	6	3	102
16:45	17	17	4	0	0	0	5	4	64	0	2	1	114
17:00	16	21	1	0	0	0	2	0	50	0	1	8	99
17:15	25	10	3	0	0	0	1	2	44	0	1	3	89
17:30	8	19	2	0	0	0	2	3	48	0	3	5	90
17:45	10	6	5	0	0	0	0	2	30	1	3	1	58
Total	114	118	31	0	0	0	18	19	402	2	24	32	760
Approach%	43.3	44.9	11.8	-	-	-	4.1	4.3	91.6	3.4	41.4	55.2	
Total%	15.0	15.5	4.1	-	-	-	2.4	2.5	52.9	0.3	3.2	4.2	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	55	62	20	-	-	-	13	12	230	1	16	15	424
Approach%	40.1	45.3	14.6	-	-	-	5.1	4.7	90.2	3.1	50.0	46.9	
Total%	13.0	14.6	4.7	-	-	-	3.1	2.8	54.2	0.2	3.8	3.5	
PHF			0.90			#DIV/0!			0.87			0.57	0.93

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #03	File Name: ITM-21-056-03
	Intersection: Center Street & Guild Street & I-8 Ramps	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Guild Street Southbound				Center Street Westbound				I-8 On/Off Ramps Northbound				Center Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				1				0				2				3	
Bike Total		0	0	0		0	0	0		0	0	0		0	1	0		1

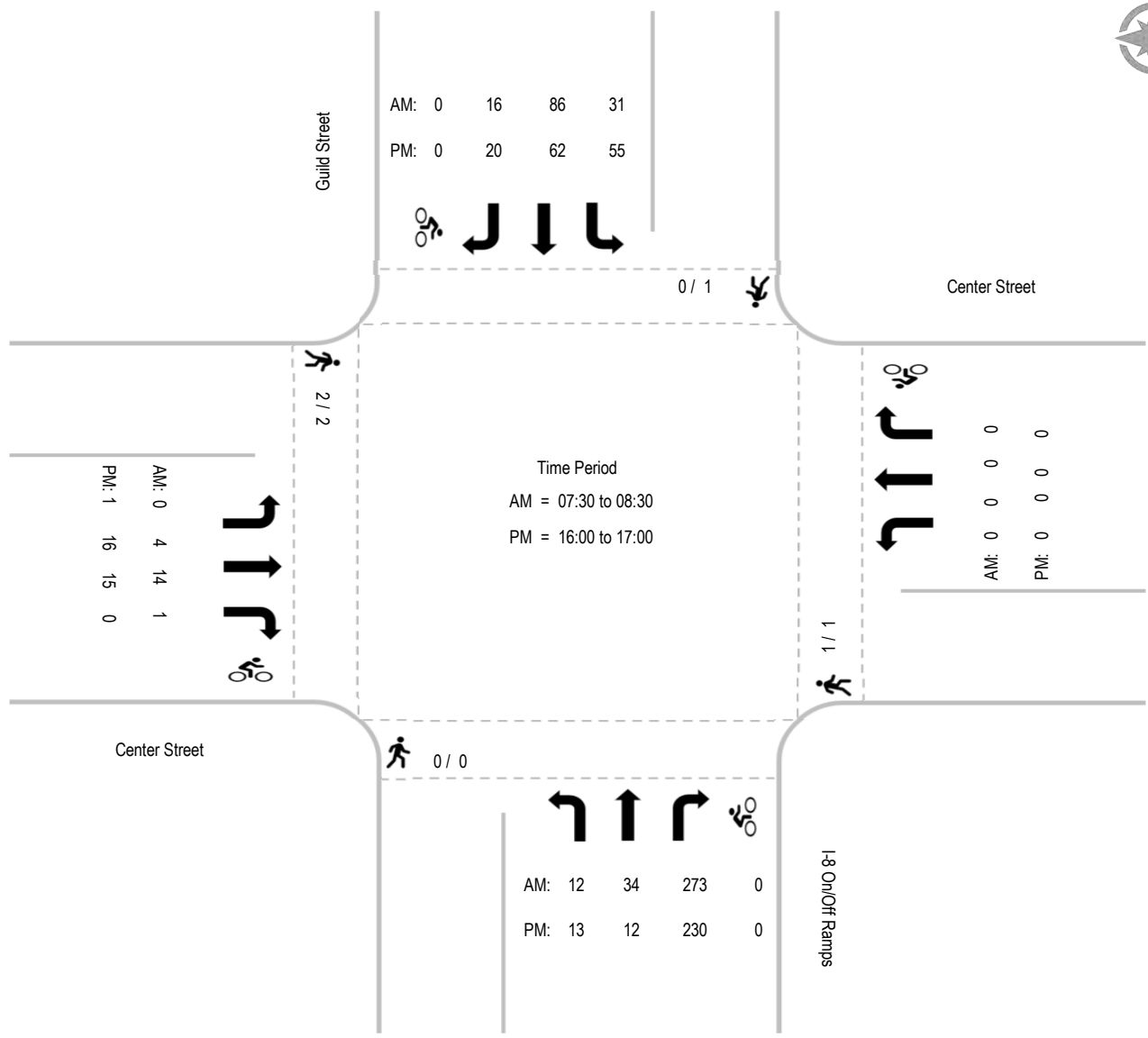
PM	Guild Street Southbound				Center Street Westbound				I-8 On/Off Ramps Northbound				Center Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	1				1				0				2				4	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

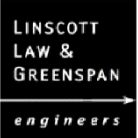


Location: #03
Intersection: Center Street & Guild Street & I-8 Ramps
Date of Count: Wednesday, September 22, 2021

File Name: ITM-21-056-03
Project: LLG Ref. 3--21-3443
 EDCO Expansion La Mesa



Intersection Turning Movement - Peak Hour Vehicle Count



Location: #04 R	File Name: ITM-21-056-04R
Intersection: Center Street & Commercial Street	Project: LLG Ref. 3--21-3443
Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Business Driveway Southbound			Commercial Street Westbound			Center Street Northbound			Commercial Street Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	0	0	0	0	19	0	37	1	25	0	0	0	82
7:15	0	0	1	0	16	0	29	2	35	0	0	0	83
7:30	0	0	2	0	25	1	32	2	46	0	0	0	108
7:45	0	0	2	0	36	0	41	3	74	0	0	0	156
8:00	0	0	4	0	49	0	51	3	77	0	0	0	184
8:15	0	0	6	0	37	1	39	2	51	0	0	0	136
8:30	0	0	1	0	33	1	42	1	67	0	0	0	145
8:45	0	0	0	0	45	0	41	7	90	0	0	0	183
Total	0	0	16	0	260	3	312	21	465	0	0	0	1077
Approach%	-	-	100.0	-	98.9	1.1	39.1	2.6	58.3	-	-	-	
Total%	-	-	1.5	-	24.1	0.3	29.0	1.9	43.2	-	-	-	

AM Intersection Peak Hour: 08:00 to 09:00

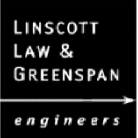
Volume	-	-	11	-	164	2	173	13	285	-	-	-	648
Approach%	-	-	100.0	-	98.8	1.2	36.7	2.8	60.5	-	-	-	
Total%	-	-	1.7	-	25.3	0.3	26.7	2.0	44.0	-	-	-	
PHF			0.46			0.85			0.85			#DIV/0!	0.83

PM	Business Driveway Southbound			Commercial Street Westbound			Center Street Northbound			Commercial Street Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	0	0	0	70	1	41	0	78	0	0	0	190
16:15	0	0	2	0	73	0	22	2	63	0	0	0	162
16:30	0	0	0	0	84	0	41	0	60	0	0	0	185
16:45	0	0	0	0	77	0	46	0	79	0	0	0	202
17:00	0	0	0	0	77	0	36	0	51	0	0	0	164
17:15	0	0	1	0	60	0	39	0	62	0	0	0	162
17:30	0	0	0	0	69	0	39	0	50	0	0	0	158
17:45	0	0	0	0	46	0	25	0	40	0	0	0	111
Total	0	0	3	0	556	1	289	2	483	0	0	0	1334
Approach%	-	-	100.0	-	99.8	0.2	37.3	0.3	62.4	-	-	-	
Total%	-	-	0.2	-	41.7	0.1	21.7	0.1	36.2	-	-	-	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	-	-	2	-	304	1	150	2	280	-	-	-	739
Approach%	-	-	100.0	-	99.7	0.3	34.7	0.5	64.8	-	-	-	
Total%	-	-	0.3	-	41.1	0.1	20.3	0.3	37.9	-	-	-	
PHF			0.25			0.91			0.86			#DIV/0!	0.91

Intersection Turning Movement - Bicycle & Pedestrian Count



Location: #04 R	File Name: ITM-21-056-04R
Intersection: Center Street & Commercial Street	Project: LLG Ref. 3--21-3443
Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Business Driveway Southbound				Commercial Street Westbound				Center Street Northbound				Commercial Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0	0	

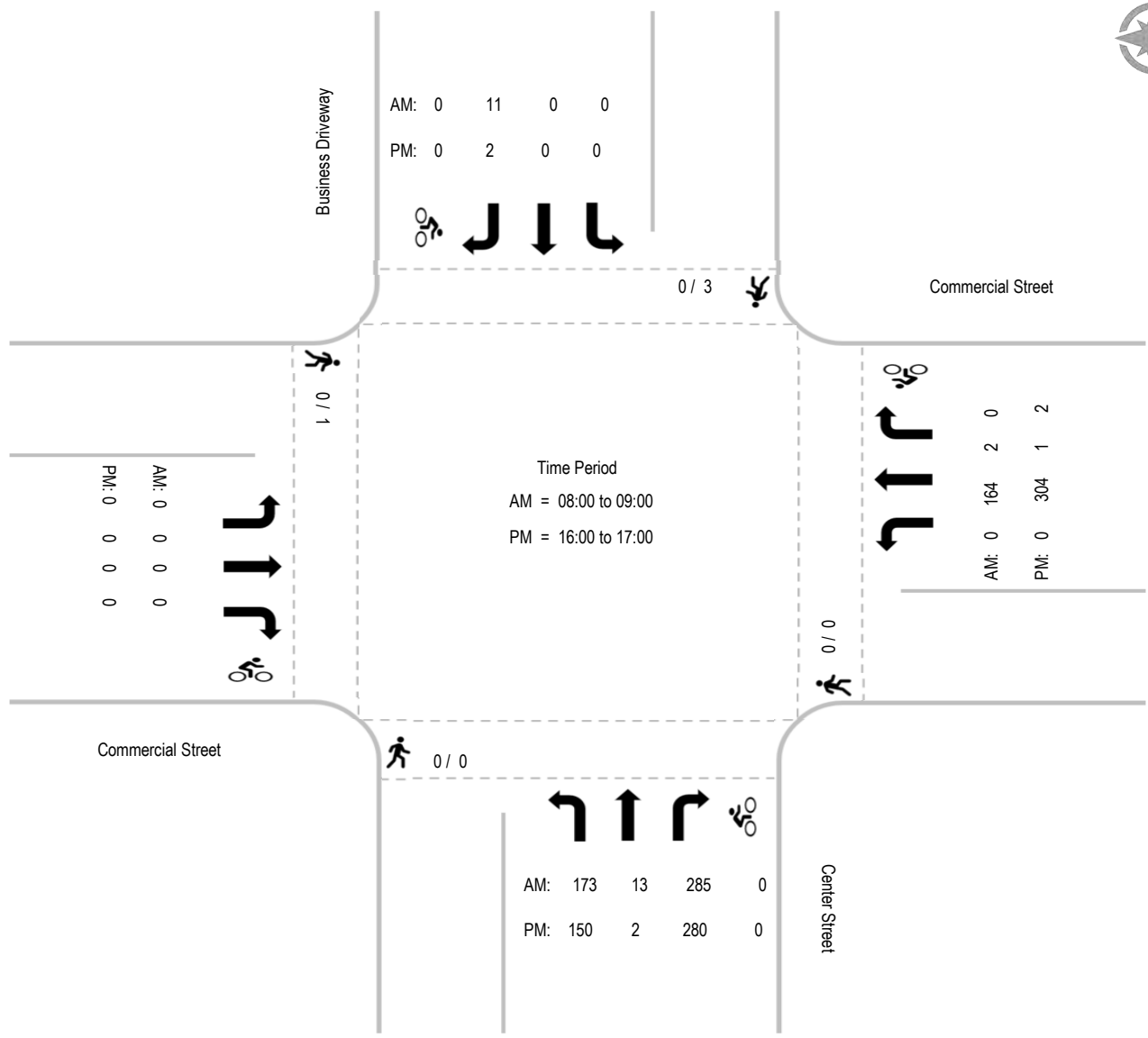
PM	Business Driveway Southbound				Commercial Street Westbound				Center Street Northbound				Commercial Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:00	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	3				0				0				1				4	
Bike Total		0	0	0		0	2	0		0	0	0		0	0	0	2	

Intersection Turning Movement - Peak Hour Summary



Location: #04 R
Intersection: Center Street & Commercial Street
Date of Count: Wednesday, September 22, 2021

File Name: ITM-21-056-04R
Project: LLG Ref. 3--21-3443
 EDCO Expansion La Mesa



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #05	File Name: ITM-21-056-05
	Intersection: Center Drive & Jackson Drive	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Center Drive Southbound			Jackson Drive Westbound			Center Street Northbound			Jackson Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	11	5	10	18	82	7	12	5	7	14	67	7	245
7:15	14	6	4	12	66	11	11	5	12	18	48	8	215
7:30	6	6	15	16	83	10	15	2	13	11	62	13	252
7:45	10	4	12	34	147	17	22	9	8	36	115	22	436
8:00	13	6	8	34	121	18	20	9	7	38	117	31	422
8:15	23	3	18	24	147	22	13	7	21	25	99	22	424
8:30	19	13	20	27	135	27	25	10	12	38	112	12	450
8:45	20	10	15	29	137	30	23	11	19	33	122	24	473
Total	116	53	102	194	918	142	141	58	99	213	742	139	2917
Approach%	42.8	19.6	37.6	15.5	73.2	11.3	47.3	19.5	33.2	19.5	67.8	12.7	
Total%	4.0	1.8	3.5	6.7	31.5	4.9	4.8	2.0	3.4	7.3	25.4	4.8	

AM Intersection Peak Hour: 08:00 to 09:00

Volume	75	32	61	114	540	97	81	37	59	134	450	89	1,769
Approach%	44.6	19.0	36.3	15.2	71.9	12.9	45.8	20.9	33.3	19.9	66.9	13.2	
Total%	4.2	1.8	3.4	6.4	30.5	5.5	4.6	2.1	3.3	7.6	25.4	5.0	
PHF			0.81			0.96			0.83			0.90	0.93

PM	Center Drive Southbound			Jackson Drive Westbound			Center Street Northbound			Jackson Drive Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	40	10	39	29	173	34	42	19	23	58	186	32	685
16:15	40	16	45	35	128	29	25	20	29	70	189	27	653
16:30	42	14	38	30	143	27	36	16	32	50	201	39	668
16:45	39	19	45	27	139	38	38	22	33	54	161	25	640
17:00	43	16	39	37	148	22	27	17	34	58	178	25	644
17:15	42	21	40	25	139	25	28	19	27	59	152	21	598
17:30	58	13	37	19	140	29	28	22	23	44	174	31	618
17:45	42	7	34	24	131	34	25	16	14	47	168	18	560
Total	346	116	317	226	1141	238	249	151	215	440	1409	218	5066
Approach%	44.4	14.9	40.7	14.1	71.1	14.8	40.5	24.6	35.0	21.3	68.2	10.5	
Total%	6.8	2.3	6.3	4.5	22.5	4.7	4.9	3.0	4.2	8.7	27.8	4.3	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	161	59	167	121	583	128	141	77	117	232	737	123	2,646
Approach%	41.6	15.2	43.2	14.5	70.1	15.4	42.1	23.0	34.9	21.2	67.5	11.3	
Total%	6.1	2.2	6.3	4.6	22.0	4.8	5.3	2.9	4.4	8.8	27.9	4.6	
PHF			0.94			0.88			0.90			0.94	0.97

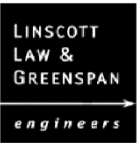
Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #05	File Name: ITM-21-056-05
	Intersection: Center Drive & Jackson Drive	Project: LLG Ref. 3--21-3443
	Date of Count: Wednesday, September 22, 2021	EDCO Expansion La Mesa

AM	Center Drive Southbound				Jackson Drive Westbound				Center Street Northbound				Jackson Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
7:30	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3
8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3
Ped Total	4				1				1				7				13	
Bike Total		0	0	0		0	1	0		0	0	0		0	1	0		2

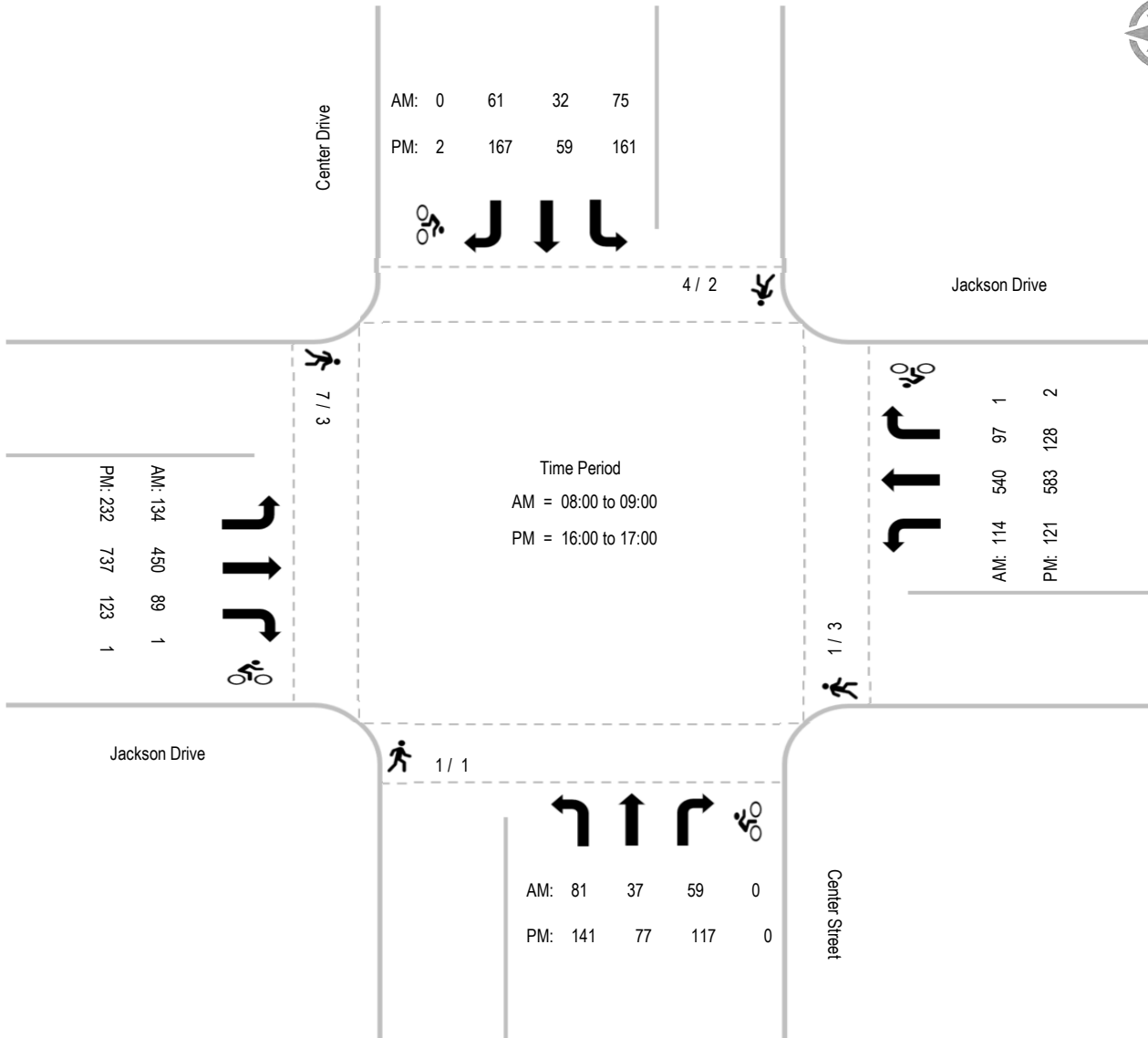
PM	Center Drive Southbound				Jackson Drive Westbound				Center Street Northbound				Jackson Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Ped Total	2				3				1				3				9	
Bike Total		0	2	0		0	1	1		0	0	0		0	1	0		5

Intersection Turning Movement - Peak Hour Summary



Location: #05
 Intersection: Center Drive & Jackson Drive
 Date of Count: Wednesday, September 22, 2021

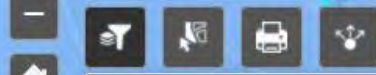
File Name: ITM-21-056-05
 Project: LLG Ref. 3--21-3443
 EDCO Expansion La Mesa



APPENDIX B

SANDAG SERIES 14 YEAR 2016 VMT TRAVEL DEMAND MODEL RESULTS

Find address or place



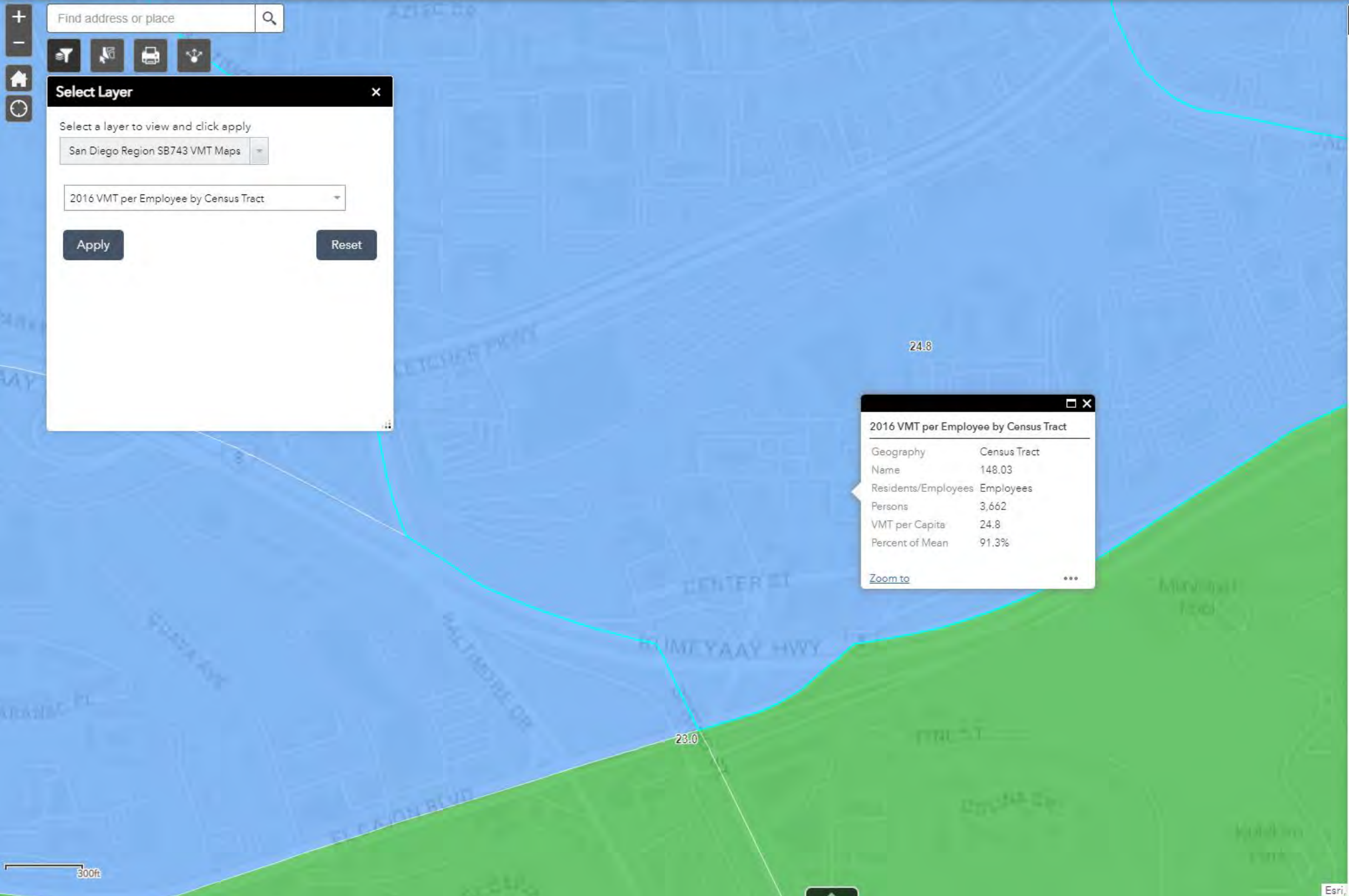
Select Layer [X]

Select a layer to view and click apply

San Diego Region SB743 VMT Maps

2016 VMT per Employee by Census Tract

Apply [Reset]



Map Legend / Disclaimer [Up] [Close]

- Map Legend**
- Percent of Mean
- More than 125% of Regional Mean
 - 100% to 125% of Regional Mean
 - 85% to 100% of Regional Mean
 - 50% to 85% of Regional Mean
 - Less than 50% of Regional Mean
 - No VMT

Current Data

2016 - Series 14 (Scenario ID 434)
Regional Mean = 19.0 VMT per Resident
Regional Mean = 27.2 VMT per Employee

Archived Data

2012 - Series 13 (Scenario ID 720)
Regional Mean = 17.6 VMT per Resident
Regional Mean = 25.9 VMT per Employee

Disclaimer

The maps provided by SANDAG are an interpretation of the Senate Bill 743 Technical Advisory guidelines published by the California Office of Planning and Research and are provided as a resource to the jurisdictions in the San Diego region to use as they see fit. Users of the data should exercise their professional judgment in reviewing, evaluating and analyzing VMT reduction estimate results from the tool. Each agency should consult with CEQA experts and legal counsel regarding their own CEQA practices and updates to local policies. Refer to full disclaimer and additional information relating to the use of the SB 743 VMT Map Web Application.

300ft

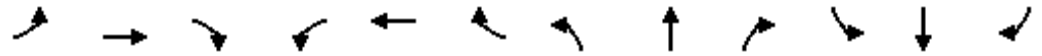
APPENDIX C
PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS –
EXISTING

HCM 6th Signalized Intersection Summary

1: Spring St & I-8 Ramp

Existing AM

10/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↕↔		↕	↕	
Traffic Volume (veh/h)	86	2	0	0	0	0	0	810	229	47	140	0
Future Volume (veh/h)	86	2	0	0	0	0	0	810	229	47	140	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	2	0				0	853	241	49	147	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	116	3	0				0	1967	555	63	1505	0
Arrive On Green	0.08	0.08	0.00				0.00	0.72	0.72	0.04	0.80	0.00
Sat Flow, veh/h	1535	34	0				0	2829	772	1781	1870	0
Grp Volume(v), veh/h	93	0	0				0	554	540	49	147	0
Grp Sat Flow(s),veh/h/ln	1569	0	0				0	1777	1731	1781	1870	0
Q Serve(g_s), s	5.8	0.0	0.0				0.0	12.7	12.7	2.7	1.7	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0				0.0	12.7	12.7	2.7	1.7	0.0
Prop In Lane	0.98		0.00				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	119	0	0				0	1278	1245	63	1505	0
V/C Ratio(X)	0.78	0.00	0.00				0.00	0.43	0.43	0.78	0.10	0.00
Avail Cap(c_a), veh/h	377	0	0				0	1278	1245	160	1505	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.4	0.0	0.0				0.0	5.7	5.7	47.8	2.1	0.0
Incr Delay (d2), s/veh	10.7	0.0	0.0				0.0	1.1	1.1	18.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0				0.0	4.3	4.2	1.5	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	0.0				0.0	6.8	6.8	66.2	2.2	0.0
LnGrp LOS	E	A	A				A	A	A	E	A	A
Approach Vol, veh/h		93						1094			196	
Approach Delay, s/veh		56.1						6.8			18.2	
Approach LOS		E						A			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	8.5	77.9		13.6				86.4				
Change Period (Y+Rc), s	5.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	9.0	50.0		24.0				64.0				
Max Q Clear Time (g_c+I1), s	4.7	14.7		7.8				3.7				
Green Ext Time (p_c), s	0.0	9.3		0.4				0.9				
Intersection Summary												
HCM 6th Ctrl Delay				11.8								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
2: Spring St & Baltimore Dr/Univeristy Ave

Existing AM
10/11/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	86	130	23	102	190	157	658	40	77	275	87
Future Volume (veh/h)	124	86	130	23	102	190	157	658	40	77	275	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	132	91	138	24	109	202	167	700	43	82	293	93
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	682	426	35	288	244	160	1555	95	105	1136	354
Arrive On Green	0.09	0.22	0.22	0.02	0.15	0.15	0.09	0.46	0.46	0.06	0.43	0.43
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3401	209	1781	2667	830
Grp Volume(v), veh/h	132	91	138	24	109	202	167	366	377	82	193	193
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1833	1781	1777	1721
Q Serve(g_s), s	8.6	2.4	7.8	1.3	5.2	12.4	9.0	14.1	14.1	4.5	7.0	7.2
Cycle Q Clear(g_c), s	8.6	2.4	7.8	1.3	5.2	12.4	9.0	14.1	14.1	4.5	7.0	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.48
Lane Grp Cap(c), veh/h	137	682	426	35	288	244	160	812	838	105	757	733
V/C Ratio(X)	0.96	0.13	0.32	0.69	0.38	0.83	1.04	0.45	0.45	0.78	0.26	0.26
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	812	838	160	757	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	31.0	26.2	48.7	38.0	41.0	45.5	18.6	18.6	46.4	18.5	18.6
Incr Delay (d2), s/veh	65.5	0.1	0.4	8.8	0.8	7.0	82.5	1.8	1.7	5.9	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.9	2.5	0.7	2.4	5.2	7.6	5.9	6.1	2.2	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.9	31.1	26.6	57.5	38.8	48.0	128.0	20.4	20.3	52.3	19.3	19.4
LnGrp LOS	F	C	C	E	D	D	F	C	C	D	B	B
Approach Vol, veh/h		361			335			910			468	
Approach Delay, s/veh		58.5			45.7			40.1			25.1	
Approach LOS		E			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	51.7	15.0	21.4	15.0	48.6	7.9	28.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	29.0	9.0	29.0	9.0	29.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	6.5	16.1	10.6	14.4	11.0	9.2	3.3	9.8				
Green Ext Time (p_c), s	0.0	4.9	0.0	1.0	0.0	3.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.8									
HCM 6th LOS			D									

Intersection

Intersection Delay, s/veh 8.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	0	4	14	0	0	0	12	34	273	31	86	16
Future Vol, veh/h	0	4	14	0	0	0	12	34	273	31	86	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	15	0	0	0	13	36	290	33	91	17
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	8.4	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	4%	0%	23%
Vol Thru, %	11%	22%	65%
Vol Right, %	86%	78%	12%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	319	18	133
LT Vol	12	0	31
Through Vol	34	4	86
RT Vol	273	14	16
Lane Flow Rate	339	19	141
Geometry Grp	1	1	1
Degree of Util (X)	0.336	0.023	0.165
Departure Headway (Hd)	3.567	4.405	4.196
Convergence, Y/N	Yes	Yes	Yes
Cap	1001	817	852
Service Time	1.611	2.405	2.237
HCM Lane V/C Ratio	0.339	0.023	0.165
HCM Control Delay	8.4	7.5	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.5	0.1	0.6

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↑			↑
Traffic Vol, veh/h	0	0	0	0	164	2	173	13	285	0	0	11
Future Vol, veh/h	0	0	0	0	164	2	173	13	285	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	198	2	208	16	343	0	0	13

























Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	-	0 206 200 - - - 199
Stage 1	-	-	- 0 0 - - - -
Stage 2	-	-	- 206 200 - - - -
Critical Hdwy	-	-	- 7.12 6.52 - - - 6.22
Critical Hdwy Stg 1	-	-	- - - - - - - -
Critical Hdwy Stg 2	-	-	- 6.12 5.52 - - - -
Follow-up Hdwy	-	-	- 3.518 4.018 - - - 3.318
Pot Cap-1 Maneuver	0	-	- 752 696 0 0 0 842
Stage 1	0	-	- - - - 0 0 0 -
Stage 2	0	-	- 796 736 0 0 0 -
Platoon blocked, %	-	-	- - - - - - - -
Mov Cap-1 Maneuver	-	-	- 740 696 - - - 842
Mov Cap-2 Maneuver	-	-	- 740 696 - - - -
Stage 1	-	-	- - - - - - - -
Stage 2	-	-	- 783 736 - - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	11.8	9.3
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	740	-	-	-	842
HCM Lane V/C Ratio	0.282	-	-	-	0.016
HCM Control Delay (s)	11.8	0	-	-	9.3
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	1.2	-	-	-	0

HCM 6th Signalized Intersection Summary
5: Center Dr & Jackson Dr

Existing AM
10/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	450	89	114	540	97	81	37	59	75	32	61
Future Volume (veh/h)	134	450	89	114	540	97	81	37	59	75	32	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	484	96	123	581	104	87	40	63	81	34	66
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	974	522	158	923	503	191	285	383	103	291	410
Arrive On Green	0.10	0.27	0.27	0.09	0.26	0.26	0.06	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	144	484	96	123	581	104	87	40	63	81	34	66
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.1	5.9	2.2	3.5	7.5	2.5	1.3	1.0	1.6	2.3	0.8	1.7
Cycle Q Clear(g_c), s	4.1	5.9	2.2	3.5	7.5	2.5	1.3	1.0	1.6	2.3	0.8	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	974	522	158	923	503	191	285	383	103	291	410
V/C Ratio(X)	0.78	0.50	0.18	0.78	0.63	0.21	0.46	0.14	0.16	0.78	0.12	0.16
Avail Cap(c_a), veh/h	262	1776	880	262	1776	884	509	978	970	262	978	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	15.7	12.4	23.0	16.9	12.9	23.6	18.9	15.5	24.0	18.8	14.8
Incr Delay (d2), s/veh	9.3	0.4	0.2	7.9	0.7	0.2	1.7	0.2	0.2	12.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.2	0.7	1.7	2.8	0.8	0.5	0.4	0.5	1.3	0.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	16.1	12.5	30.9	17.6	13.1	25.3	19.2	15.7	36.1	18.9	15.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		724			808			190			181	
Approach Delay, s/veh		18.8			19.1			20.8			25.2	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	20.2	7.9	14.0	10.3	19.4	8.0	13.9				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+I1), s	5.5	7.9	3.3	3.7	6.1	9.5	4.3	3.6				
Green Ext Time (p_c), s	0.1	3.3	0.1	0.3	0.1	3.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				19.7								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
1: Spring St & I-8 Ramp

Existing PM
10/05/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↕↔		↖	↗	
Traffic Volume (veh/h)	69	3	4	0	0	0	0	642	223	118	275	0
Future Volume (veh/h)	69	3	4	0	0	0	0	642	223	118	275	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	82	4	5				0	764	265	140	327	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	104	5	6				0	1706	591	173	1507	0
Arrive On Green	0.07	0.07	0.07				0.00	0.66	0.66	0.10	0.81	0.00
Sat Flow, veh/h	1406	69	86				0	2682	898	1781	1870	0
Grp Volume(v), veh/h	91	0	0				0	524	505	140	327	0
Grp Sat Flow(s),veh/h/ln	1560	0	0				0	1777	1709	1781	1870	0
Q Serve(g_s), s	5.7	0.0	0.0				0.0	14.3	14.3	7.7	4.1	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0				0.0	14.3	14.3	7.7	4.1	0.0
Prop In Lane	0.90		0.05				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	116	0	0				0	1171	1126	173	1507	0
V/C Ratio(X)	0.79	0.00	0.00				0.00	0.45	0.45	0.81	0.22	0.00
Avail Cap(c_a), veh/h	343	0	0				0	1171	1126	303	1507	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.5	0.0	0.0				0.0	8.2	8.2	44.3	2.3	0.0
Incr Delay (d2), s/veh	11.1	0.0	0.0				0.0	1.2	1.3	8.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0				0.0	5.3	5.1	3.8	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.0	0.0				0.0	9.5	9.5	53.0	2.6	0.0
LnGrp LOS	E	A	A				A	A	A	D	A	A
Approach Vol, veh/h		91						1029			467	
Approach Delay, s/veh		56.7						9.5			17.7	
Approach LOS		E						A			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	14.7	71.9		13.4				86.6				
Change Period (Y+Rc), s	5.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	17.0	44.0		22.0				66.0				
Max Q Clear Time (g_c+I1), s	9.7	16.3		7.7				6.1				
Green Ext Time (p_c), s	0.2	8.0		0.3				2.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

2: Spring St & Baltimore Dr/Univeristy Ave

Existing PM

10/11/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	98	242	44	114	155	125	556	13	134	694	104
Future Volume (veh/h)	163	98	242	44	114	155	125	556	13	134	694	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	179	108	266	48	125	170	137	611	14	147	763	114
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	618	398	61	277	234	160	1534	35	160	1340	200
Arrive On Green	0.09	0.20	0.20	0.03	0.15	0.15	0.09	0.43	0.43	0.09	0.43	0.43
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3551	81	1781	3101	463
Grp Volume(v), veh/h	179	108	266	48	125	170	137	306	319	147	437	440
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1856	1781	1777	1787
Q Serve(g_s), s	9.0	2.9	17.2	2.7	6.1	10.2	7.6	11.8	11.8	8.2	18.5	18.5
Cycle Q Clear(g_c), s	9.0	2.9	17.2	2.7	6.1	10.2	7.6	11.8	11.8	8.2	18.5	18.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.26
Lane Grp Cap(c), veh/h	137	618	398	61	277	234	160	768	802	160	768	772
V/C Ratio(X)	1.31	0.17	0.67	0.78	0.45	0.73	0.85	0.40	0.40	0.92	0.57	0.57
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	768	802	160	768	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	32.9	31.1	47.9	38.9	40.7	44.9	19.5	19.5	45.1	21.4	21.4
Incr Delay (d2), s/veh	180.3	0.1	2.2	7.8	1.2	4.2	32.3	1.5	1.5	46.7	3.1	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	1.1	5.7	1.3	2.8	4.2	4.7	5.0	5.2	5.6	8.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	225.8	33.0	33.2	55.7	40.1	44.9	77.2	21.0	21.0	91.8	24.4	24.4
LnGrp LOS	F	C	C	E	D	D	E	C	C	F	C	C
Approach Vol, veh/h		553			343			762			1024	
Approach Delay, s/veh		95.5			44.6			31.1			34.1	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	49.2	15.0	20.8	15.0	49.2	9.5	26.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	29.0	9.0	29.0	9.0	29.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	10.2	13.8	11.0	12.2	9.6	20.5	4.7	19.2				
Green Ext Time (p_c), s	0.0	4.5	0.0	1.1	0.0	4.4	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	1	16	15	0	0	0	13	12	230	55	62	20
Future Vol, veh/h	1	16	15	0	0	0	13	12	230	55	62	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	17	16	0	0	0	14	13	247	59	67	22
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	5%	3%	40%
Vol Thru, %	5%	50%	45%
Vol Right, %	90%	47%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	255	32	137
LT Vol	13	1	55
Through Vol	12	16	62
RT Vol	230	15	20
Lane Flow Rate	274	34	147
Geometry Grp	1	1	1
Degree of Util (X)	0.272	0.043	0.172
Departure Headway (Hd)	3.574	4.493	4.194
Convergence, Y/N	Yes	Yes	Yes
Cap	995	802	850
Service Time	1.633	2.493	2.243
HCM Lane V/C Ratio	0.275	0.042	0.173
HCM Control Delay	8	7.7	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.1	0.1	0.6

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↑			↑
Traffic Vol, veh/h	0	0	0	0	304	1	150	2	280	0	0	2
Future Vol, veh/h	0	0	0	0	304	1	150	2	280	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	334	1	165	2	308	0	0	2

























Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	-	0 336 335
Stage 1	-	-	0 0
Stage 2	-	-	336 335
Critical Hdwy	-	-	7.12 6.52
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	6.12 5.52
Follow-up Hdwy	-	-	3.518 4.018
Pot Cap-1 Maneuver	0	-	618 585 0 0 0 707
Stage 1	0	-	- - 0 0 0 -
Stage 2	0	-	678 643 0 0 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	616 585 - - - 707
Mov Cap-2 Maneuver	-	-	616 585 - - - -
Stage 1	-	-	- - - - -
Stage 2	-	-	676 643 - - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	13	10.1
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	616	-	-	-	707
HCM Lane V/C Ratio	0.268	-	-	-	0.003
HCM Control Delay (s)	13	0	-	-	10.1
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	1.1	-	-	-	0

HCM 6th Signalized Intersection Summary
5: Center Dr & Jackson Dr

Existing PM
10/05/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	737	123	121	583	128	141	77	117	161	59	167
Future Volume (veh/h)	232	737	123	121	583	128	141	77	117	161	59	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	760	127	125	601	132	145	79	121	166	61	172
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1062	583	160	935	602	239	247	352	207	335	483
Arrive On Green	0.13	0.30	0.30	0.09	0.26	0.26	0.07	0.13	0.13	0.12	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	239	760	127	125	601	132	145	79	121	166	61	172
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.6	11.6	3.3	4.2	9.1	3.4	2.5	2.3	3.9	5.5	1.7	5.1
Cycle Q Clear(g_c), s	7.6	11.6	3.3	4.2	9.1	3.4	2.5	2.3	3.9	5.5	1.7	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1062	583	160	935	602	239	247	352	207	335	483
V/C Ratio(X)	1.07	0.72	0.22	0.78	0.64	0.22	0.61	0.32	0.34	0.80	0.18	0.36
Avail Cap(c_a), veh/h	223	1513	784	223	1513	859	433	833	849	223	833	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	19.0	13.2	27.0	19.8	12.7	27.4	23.8	19.9	26.1	21.1	16.4
Incr Delay (d2), s/veh	79.9	0.9	0.2	11.1	0.7	0.2	2.5	0.7	0.6	17.5	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	4.4	1.1	2.2	3.5	1.1	1.1	1.0	1.4	3.2	0.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.4	19.9	13.3	38.1	20.5	12.9	29.9	24.6	20.4	43.6	21.4	16.9
LnGrp LOS	F	B	B	D	C	B	C	C	C	D	C	B
Approach Vol, veh/h		1126			858			345			399	
Approach Delay, s/veh		37.5			21.9			25.4			28.7	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.1	9.2	16.9	12.6	21.9	12.0	14.0				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+1), s	6.2	13.6	4.5	7.1	9.6	11.1	7.5	5.9				
Green Ext Time (p_c), s	0.0	4.5	0.1	0.8	0.0	4.0	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

APPENDIX D

EXCERPTS FROM CUMULATIVE PROJECT TRAFFIC STUDIES

ALVARADO SPECIFIC PLAN



Transportation Report Part II: Local Transportation Analysis (LOS/Delay-Based)

MARCH 2020

Prepared By:

Kimley»»Horn

4 PROJECT TRAFFIC

The following section describes the trip generation, distribution, and assignment related to the proposed Project.

4.1 TRIP GENERATION

Trip generation for the project site were estimated using traffic generation rates from SANDAG's *Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). The proposed site would consist of four multi-family residential buildings providing an upper estimate of approximately 950 dwelling units (du). A 5% trip generation reduction was applied to the multi-family residences due to the project being within 1/4-mile from a transit station (70th Street Trolley Station). The 15,000 sf of onsite commercial (retail) uses would serve the residents and therefore assumed not to generate any external trips. Any minor increase in trips due to workers and deliveries would be less than the trip reduction associated with residential customers not having to leave the site.

The project will claim existing trips associated with the San Diego RV Resort campground, which provides 167 campsites for recreational vehicles.

Discounting the trip credits associated with the mobile home, the net trip generation for the proposed site is summarized below.

Project Trips (Buildings 1-4):

- 4,747 daily trips (ADT)
- 405 a.m. peak-hour trips (75 in, 330 out)
- 434 p.m. peak-hour trips (305 in, 129 out)

Table 4-1 further details the trip generation for the proposed site.

4.2 TRIP DISTRIBUTION

Traffic trip distribution for the proposed Project was based on SANDAG's select zone analysis model run and the existing roadway network and proposed access locations within the study area. The select zone model run output is provided in **Appendix II-F**

Figure 4-1 and **Figure 4-2** illustrate the estimated traffic distribution for the proposed Project.

4.3 TRIP ASSIGNMENT

Based on the expected Project trip distributions, daily, a.m., and p.m. peak-hour Project trips were assigned to the roadway network and through the study intersections. The trip assignment for the proposed Project is presented in **Figure 4-3**.

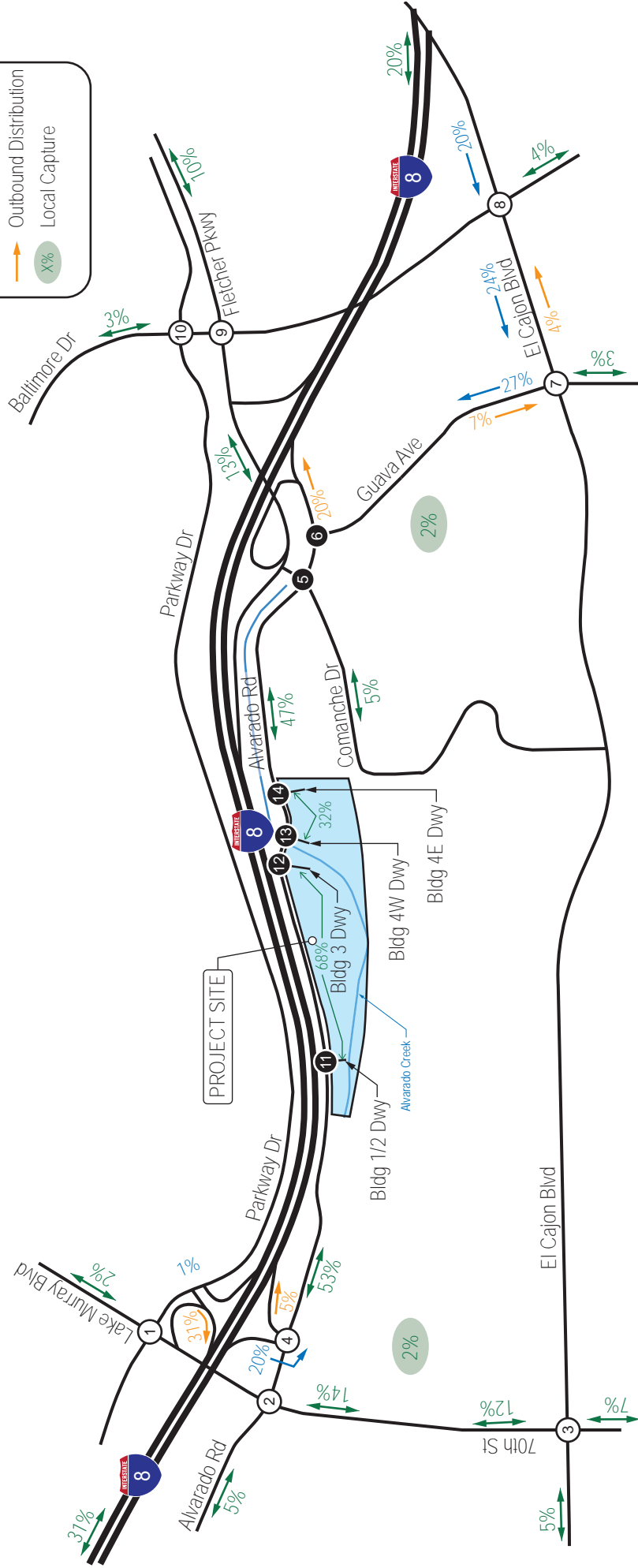
Alvarado Creek

Land Use	Land Use as listed in SANDAG	Units ¹	Trip Rate ²	Daily Trips ³	AM Peak-Hour			PM Peak-Hour						
					% of ADT ²	In:Out Ratio ²	In	Out	Total	% of ADT ²	In:Out Ratio ²	In	Out	Total
Proposed														
Driveway Trips³														
Building 1	Apartment	60 du	6 / du	360	8%	2.00 : 8.00	6	23	29	9%	7.00 : 3.00	23	9	32
Building 2	Apartment	280 du	6 / du	1,680	8%	2.00 : 8.00	27	107	134	9%	7.00 : 3.00	106	45	151
Building 3	Apartment	307 du	6 / du	1,842	8%	2.00 : 8.00	29	118	147	9%	7.00 : 3.00	116	50	166
Building 4	Apartment	303 du	6 / du	1,818	8%	2.00 : 8.00	29	116	145	9%	7.00 : 3.00	115	49	164
	(Transit Reduction 5%)		/	-285			-5	-18	-23			-18	-8	-26
Proposed Total				5,415			86	346	432			342	145	487
Existing														
San Diego RV Resort	Campground	167 campsites	4 / campsites	668	4%	4.00 : 6.00	11	16	27	8%	7.00 : 3.00	37	16	53
Existing Total				668			11	16	27			37	16	53
NET TRIP GENERATION =					4,747		75	330	405			305	129	434

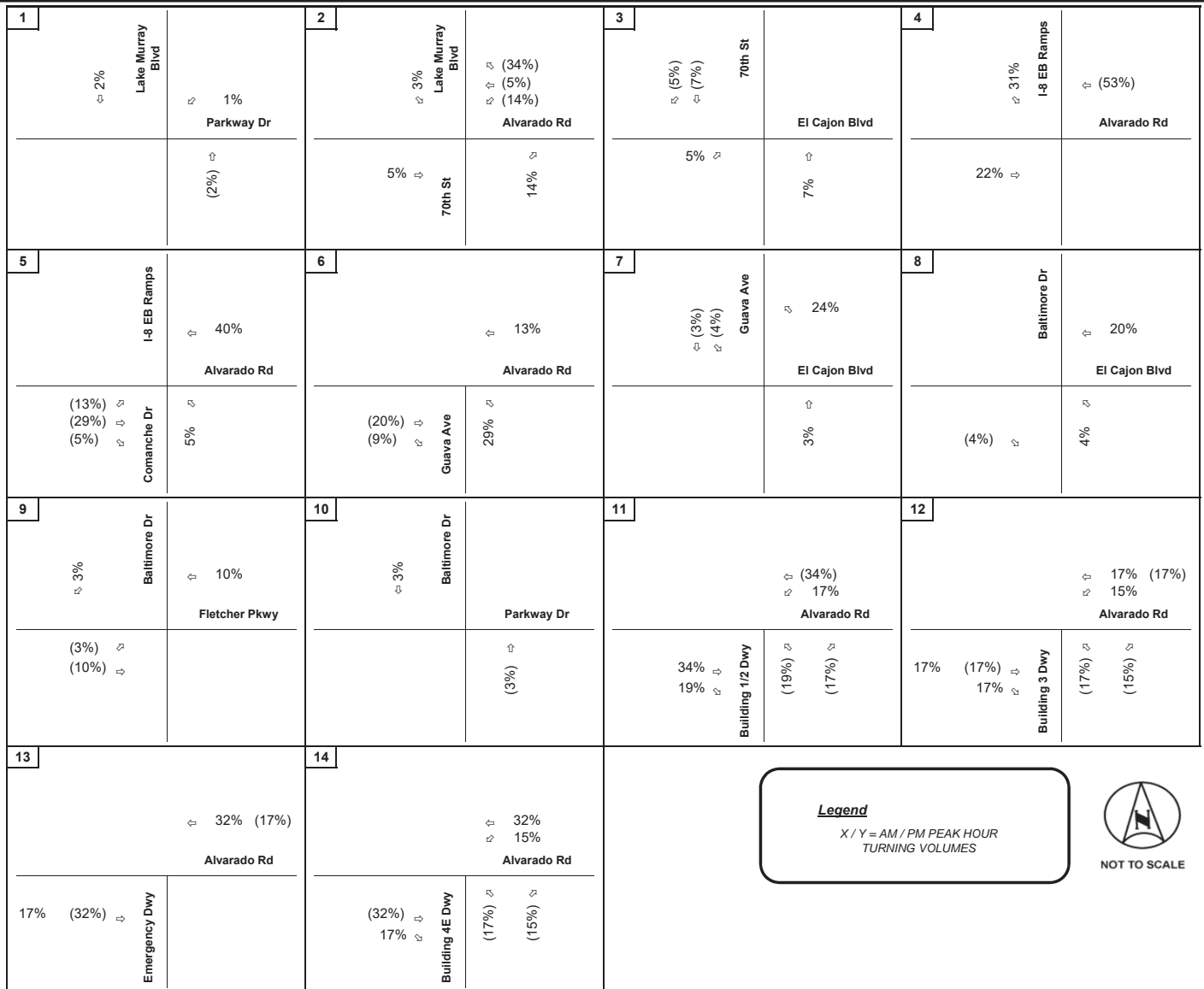
Note:

1. du = dwelling unit
2. Trip rates referenced from the Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002
3. Driveway trips are the total number of trips generated by a site.

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Alvarado Creek



TRANSPORTATION IMPACT ANALYSIS

JEFFERSON LA MESA

La Mesa, California
May 2, 2019

LLG Ref. 3-18-2856

Prepared by:

Narasimha Prasad
Senior Transportation Engineer

Under the Supervision of:

John Boarman P. E.
Principal

**Linscott, Law &
Greenspan, Engineers**

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**TABLE 8-1
PROJECT TRIP GENERATION**

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate ^a	Volume	% of ADT	In : Out Split	Volume			% of ADT	In : Out Split	Volume		
						In	Out	Total			In	Out	Total
Apartments	230 DU	6/DU	1,380	8%	20:80	22	88	110	9%	70:30	87	37	124
Live / Work Units (4 units of 712 SF each)	2,848 SF	40/KSF	114	3%	60:40	2	1	3	9%	50:50	5	5	10
Total			1,494			24	89	113			92	42	134

Footnotes:

a. Rates are based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

August 4, 2008

Mr. Arnold Schmidt
3175 Cauby Street # 90
San Diego, CA 92110

Re: Traffic Assessment Letter for the Montebello North Mixed Use Project

Dear Mr. Schmidt:

In accordance with the City of La Mesa's request for a traffic assessment letter, Kimley-Horn and Associates has evaluated the potential traffic impacts associated with your project. The site is located on the north side of El Cajon Boulevard, just east of Thorne Drive in the community of La Mesa, in the San Diego County. The proposed project consists of the development of 122 residential condominiums, and 6,000 square feet of retail use. The existing site currently is occupied by 37 mobile homes dwelling units, 5 single families' residential units, a 2,200 square feet high-turn over restaurant and 3,300 specialty retail use. The majority of the project traffic would take access off the east side of Thorne Drive. In addition, the project will provide a secondary access along the north side of El Cajon Boulevard that would serve primarily the proposed retail uses. **Figure 1** depicts the project location in a regional context. **Figure 2** shows the site plan for the proposed project. The **Appendix** to this letter contains all the existing traffic volumes information and analysis worksheets. The following paragraphs summarize the key findings of the traffic assessment letter for your project.

Project Traffic

Trip Generation

Trip generation rates published by the SANDAG *Brief Guide of Vehicular Traffic Generation Rates* for the San Diego Region, April 2002 were applied in order to determine the traffic generation characteristics of the site.

Table 5 summarizes the trip generation for the proposed project. As shown in the table, the proposed project would have a total trip generation of approximately 972 daily trips, including 66 (16 in, 50 out) a.m. peak-hour trips, and 88 (57 in, 31 out) p.m. peak-hour trips. The existing site uses currently generate approximately 719 daily trips, including 51 (20 in and 31 out) a.m. peak-hour trips, and 65 (39 in, 26 out) p.m. peak-hour trips. Since the existing trips generation for the current uses is consider trip credits for the proposed new site, the net trip generation for the proposed project is 253 daily trips, including 15 (- 4 in, 19 out) a.m. peak-hour trips and 23 (18 in, 5 out) p.m. peak-hour trips.

Trip Distribution

The project trip distribution for the proposed project is based on existing travel patterns in the study area and freeway access locations. The following list shows the assumed project trip distribution for the proposed project:

- 65 percent to/from the east along El Cajon Boulevard
 - 50 percent to/from the east along El Cajon Boulevard
 - 15 percent to/from the south along La Mesa Boulevard
- 35 percent to/from the west along El Cajon Boulevard
 - 33 percent to/from the west along El Cajon Boulevard
 - 2 percent to/from the south along Parks Avenue

Figures 7 and 8 display the assumed project trip distribution through the study intersection and along the roadway segment, respectively.

Trip Assignment

Based on the project trip distribution, the peak-hour and daily project trips were assigned to the study intersection and local roadway network in the study area. **Figures 9 and 10** show the project trip assignment at the study intersections and along the roadway segments, respectively.

**TABLE 5
TRIP GENERATION SUMMARY**

Land Use	Land Use as listed in SANDAG		Units ¹	Trip Rate ²	Daily Trips	AM Peak-Hour			PM Peak-Hour						
						% of ADT ²	In	Out	Total	% of ADT ²	In	Out	Total		
DRIVEWAY TRIPS³															
<i>Proposed</i>	Apartment		122 du	6 / du	732	8%	2.00 : 8.00	12	47	59	9%	7.00 : 3.00	46	20	66
	Specialty Retail/Strip Commercial		6 ksf	40 / ksf	240	3%	6.00 : 4.00	4	3	7	9%	5.00 : 5.00	11	11	22
Proposed Total					972			16	50	66			57	31	88
<i>Existing</i>	Family		37 du	5 / du	185	8%	3.00 : 7.00	4	11	15	11%	6.00 : 4.00	12	8	20
	Single Family Detached		5 du	10 / du	50	8%	3.00 : 7.00	1	3	4	10%	7.00 : 3.00	4	1	5
	Sit-down, high turnover		2.2 ksf	160 / ksf	352	8%	5.00 : 5.00	14	14	28	8%	6.00 : 4.00	17	11	28
	Specialty Retail/Strip Commercial		3.3 ksf	40 / ksf	132	3%	6.00 : 4.00	1	3	4	9%	5.00 : 5.00	6	6	12
Existing Total					719			20	31	51			39	26	65
NET TRIP GENERATION =					253			-4	19	15			18	5	23

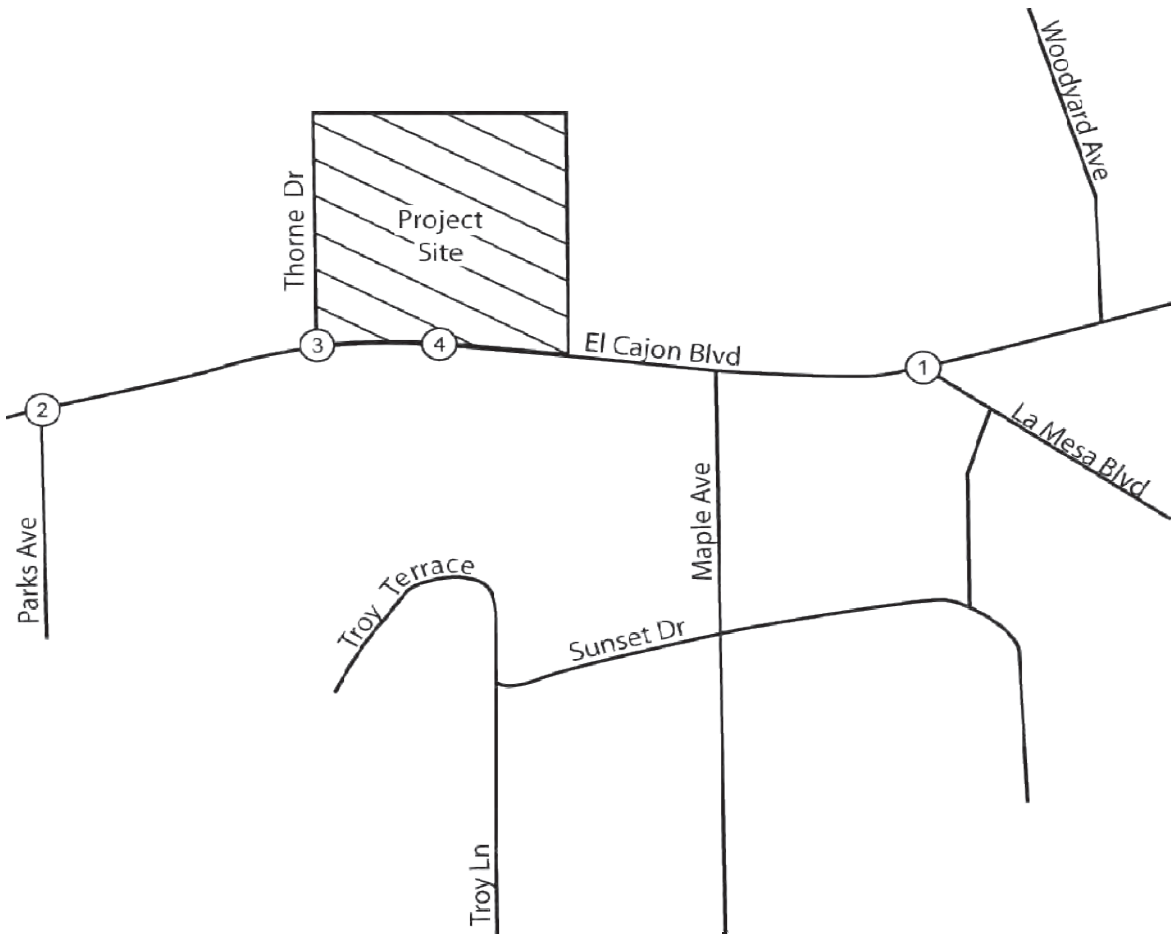
Note:

1. DU = Dwelling Unit
2. Trip rates referenced from the Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002
3. Driveway trips are the total number of trips generated by a site.

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Montebello- North Site

<p>1</p> <p>Private Dwy</p> <p>↕ 50%</p> <p>El Cajon Blvd</p>	<p>2</p> <p>Parks Ave</p> <p>↕ (33%) ↕ (67%)</p> <p>El Cajon Blvd</p>	<p>3</p> <p>Thorne Dr</p> <p>↕ 95%</p> <p>El Cajon Blvd</p>	<p>4</p> <p>Project Dwy</p> <p>↕ 5%</p> <p>El Cajon Blvd</p>
<p>↕ 35% ↕ (50%) ↕ (15%)</p> <p>La Mesa Blvd</p> <p>↕ 15%</p>	<p>↕ 33%</p> <p>↕ 2%</p>	<p>↕ (95%)</p> <p>↕ 35% (65%)</p>	<p>↕ (5%)</p>



Legend
 X% / (Y%) = IN / OUT PERCENT DISTRIBUTION



NOT TO SCALE

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Kimley-Horn
and Associates, Inc.

■
Suite 301
517 Fourth Avenue
San Diego, California
92101

December 20, 2007

Mr. Arnold Schmidt
3175 Cauby Street # 90
San Diego, CA 92110

Re: Traffic Assessment Letter for the Montebello South Mixed Use Project

Dear Mr. Schmidt:

In accordance with the City of La Mesa's request for a traffic assessment letter, Kimley-Horn and Associates has evaluated the potential traffic impacts associated with your project. The site is located on the south side of El Cajon Boulevard, just north of Troy Terrace in the community of La Mesa, in the San Diego County. The proposed project consists of the development of 80 residential condominiums, 3,310 square feet of office and 4,840 square feet of retail use. The existing site is currently vacant. The project would take access off the south side of El Cajon Boulevard. As part of the proposed project, a new driveway will be constructed at the northwest corner of the project site. The second access point will be the existing private driveway along the east side of the site. The second access point will be shared with a recent constructed mixed-use residential development. Both project access points will function as right-in/right-out stop controlled intersections. **Figure 1** depicts the project location in a regional context. **Figure 2** shows the site plan for the proposed project. The **Appendix** to this letter contains all the existing traffic volumes information and analysis worksheets. The following paragraphs summarize the key findings of the traffic assessment letter for your project.

■
TEL 619 234 9411
FAX 619 234 9433

Project Traffic

Trip Generation

Trip generation rates published by the SANDAG *Brief Guide of Vehicular Traffic Generation Rates* for the San Diego Region, April 2002 were applied in order to determine the traffic generation characteristics of the site. The net trip generation was estimated for the a.m. and p.m. peak-hour and daily traffic.

Table 5 summarizes the trip generation for the proposed project. As shown in the table, the proposed project would have a total trip generation of approximately 740 daily trips, including 53 (19 in, 34 out) a.m. peak-hour trips, and 69 (41 in, 28 out) p.m. peak-hour trips.

Trip Distribution

The project trip distribution for the proposed project is based on existing travel patterns in the study area and freeway access locations. The following list shows the assumed project trip distribution for the proposed project:

- 65 percent to/from the east along El Cajon Boulevard
 - 50 percent to/from the east along El Cajon Boulevard
 - 15 percent to/from the south along La Mesa Boulevard
- 35 percent to/from the west along El Cajon Boulevard
 - 33 percent to/from the west along El Cajon Boulevard
 - 2 percent to/from the south along Parks Avenue

Figures 7 and 8 display the assumed project trip distribution through the study intersection and along the roadway segment, respectively.

Trip Assignment

Based on the project trip distribution, the peak-hour and daily project trips were assigned to the study intersection and local roadway network in the study area. **Figures 9 and 10** show the project trip assignment at the study intersections and along the roadway segments, respectively.

**TABLE 5
TRIP GENERATION SUMMARY**

Land Use	Land Use as listed in SANDAG	Units ¹	Trip Rate ²	Daily Trips	AM Peak-Hour					PM Peak-Hour					
					% of ADT ²	In:Out Ratio ²	In	Out	Total	% of ADT ²	In:Out Ratio ²	In	Out	Total	
DRIVEWAY TRIPS³															
<i>Proposed</i>															
	Apartment	80 du	6 / du	480	8%	2.00 : 8.00	8	30	38	9%	7.00 : 3.00	30	13	43	
	Specialty Retail/Strip Commercial	5 ksf	40 / ksf	194	3%	6.00 : 4.00	3	3	6	9%	5.00 : 5.00	9	8	17	
	Standard Commercial Office	3 ksf	20 / ksf	66	14%	9.00 : 1.00	8	1	9	13%	2.00 : 8.00	2	7	9	
Proposed Total				740			19	34	53			41	28	69	
NET TRIP GENERATION =				740			19	34	53			41	28	69	

Note:

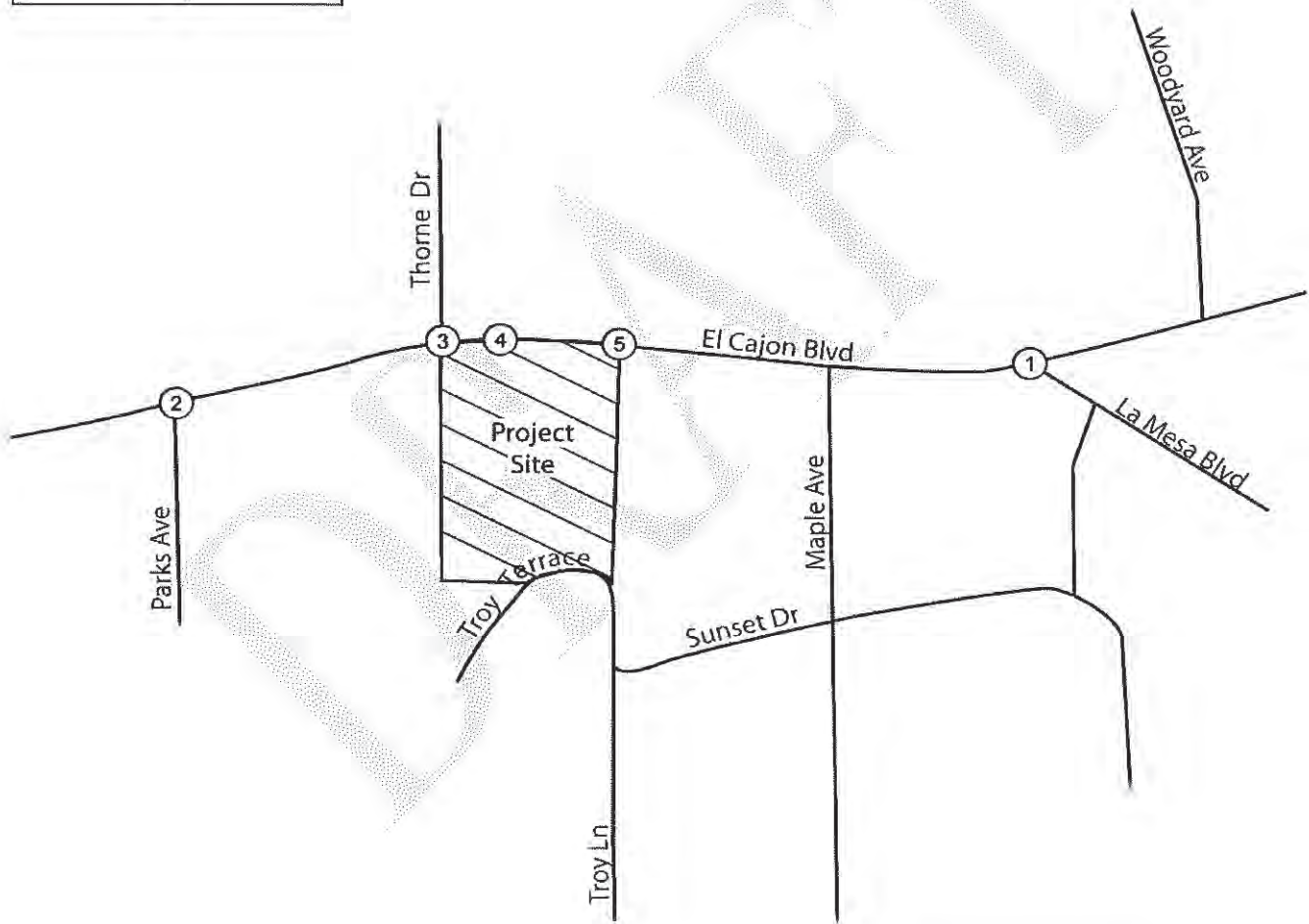
1. DU = Dwelling Unit; Ksf= Thousand Square Feet

2. Trip rates referenced from the Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG, April 2002

3. Driveway trips are the total number of trips generated by a site.

Montebello- South Site

<p>1</p> <table border="1"> <tr> <td>Private Dwy</td> <td>50%</td> </tr> <tr> <td>El Cajon Blvd</td> <td></td> </tr> <tr> <td>(35%) (50%) (15%)</td> <td>15%</td> </tr> <tr> <td>La Mesa Blvd</td> <td></td> </tr> </table>	Private Dwy	50%	El Cajon Blvd		(35%) (50%) (15%)	15%	La Mesa Blvd		<p>2</p> <table border="1"> <tr> <td>Parks Ave</td> <td>(33%) 65% (2%)</td> </tr> <tr> <td>El Cajon Blvd</td> <td></td> </tr> <tr> <td>33%</td> <td>2%</td> </tr> </table>	Parks Ave	(33%) 65% (2%)	El Cajon Blvd		33%	2%	<p>3</p> <table border="1"> <tr> <td>Thorne Dr</td> <td>65% (35%)</td> </tr> <tr> <td>El Cajon Blvd</td> <td></td> </tr> <tr> <td>100%</td> <td></td> </tr> </table>	Thorne Dr	65% (35%)	El Cajon Blvd		100%		<p>4</p> <table border="1"> <tr> <td></td> <td>65% (35%)</td> </tr> <tr> <td>El Cajon Blvd</td> <td></td> </tr> <tr> <td>50% 50%</td> <td>50%</td> </tr> <tr> <td>Project Dwy 1</td> <td>(50%)</td> </tr> </table>		65% (35%)	El Cajon Blvd		50% 50%	50%	Project Dwy 1	(50%)
Private Dwy	50%																														
El Cajon Blvd																															
(35%) (50%) (15%)	15%																														
La Mesa Blvd																															
Parks Ave	(33%) 65% (2%)																														
El Cajon Blvd																															
33%	2%																														
Thorne Dr	65% (35%)																														
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El Cajon Blvd																															
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	65%																														
El Cajon Blvd																															
(50%) 50%	(50%)																														
Project Dwy 2																															



Legend
 X% / (Y%) = IN / OUT PERCENT DISTRIBUTION



FIGURE 7

TRANSPORTATION IMPACT ANALYSIS
ALLISON AVENUE TRANSIT ORIENTED DEVELOPMENT
La Mesa, California
May 27, 2021

LLG Ref. 3-20-3323

Prepared by:
Narasimha Prasad
Senior Transportation Engineer

Under the Supervision of:
John Boarman, P. E.
Principal

**Linscott, Law &
Greenspan, Engineers**

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TABLE 9-1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate ^a	Volume	% of ADT ^a	In:Out Split ^a	Volume			% of ADT ^a	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Apartments	147 DU	6 /DU	882	8%	20 : 80	14	57	71	9%	70 : 30	55	24	79

Footnotes:

a. Rates are based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

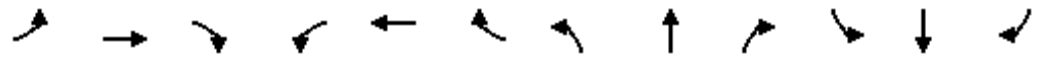
APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING YEAR WITHOUT PROJECT

HCM 6th Signalized Intersection Summary
1: Spring St & I-8 Ramp

Existing + Cumulative AM

10/07/2021

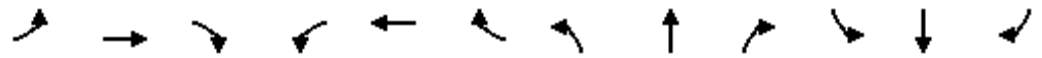


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕		↕	↕	
Traffic Volume (veh/h)	86	2	0	0	0	0	0	817	235	47	140	0
Future Volume (veh/h)	86	2	0	0	0	0	0	817	235	47	140	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	2	0				0	860	247	49	147	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	116	3	0				0	1959	562	63	1505	0
Arrive On Green	0.08	0.08	0.00				0.00	0.72	0.72	0.04	0.80	0.00
Sat Flow, veh/h	1535	34	0				0	2818	782	1781	1870	0
Grp Volume(v), veh/h	93	0	0				0	561	546	49	147	0
Grp Sat Flow(s),veh/h/ln	1569	0	0				0	1777	1730	1781	1870	0
Q Serve(g_s), s	5.8	0.0	0.0				0.0	12.9	13.0	2.7	1.7	0.0
Cycle Q Clear(g_c), s	5.8	0.0	0.0				0.0	12.9	13.0	2.7	1.7	0.0
Prop In Lane	0.98		0.00				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	119	0	0				0	1278	1244	63	1505	0
V/C Ratio(X)	0.78	0.00	0.00				0.00	0.44	0.44	0.78	0.10	0.00
Avail Cap(c_a), veh/h	377	0	0				0	1278	1244	143	1505	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.4	0.0	0.0				0.0	5.8	5.8	47.8	2.1	0.0
Incr Delay (d2), s/veh	10.7	0.0	0.0				0.0	1.1	1.1	18.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0				0.0	4.4	4.3	1.5	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	0.0				0.0	6.9	6.9	66.3	2.2	0.0
LnGrp LOS	E	A	A				A	A	A	E	A	A
Approach Vol, veh/h		93						1107			196	
Approach Delay, s/veh		56.1						6.9			18.2	
Approach LOS		E						A			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	8.5	77.9		13.6				86.4				
Change Period (Y+Rc), s	5.0	6.0		6.0				6.0				
Max Green Setting (Gmax), s	8.0	51.0		24.0				64.0				
Max Q Clear Time (g_c+I1), s	4.7	15.0		7.8				3.7				
Green Ext Time (p_c), s	0.0	9.5		0.4				0.9				
Intersection Summary												
HCM 6th Ctrl Delay				11.8								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
2: Spring St & Baltimore Dr/Univeristy Ave

Existing + Cumulative AM

10/11/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	94	145	23	106	190	161	671	40	77	277	87
Future Volume (veh/h)	124	94	145	23	106	190	161	671	40	77	277	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	132	100	154	24	113	202	171	714	43	82	295	93
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	683	427	35	288	244	160	1556	94	105	1138	352
Arrive On Green	0.09	0.22	0.22	0.02	0.15	0.15	0.09	0.46	0.46	0.06	0.43	0.43
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3405	205	1781	2672	826
Grp Volume(v), veh/h	132	100	154	24	113	202	171	372	385	82	194	194
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1833	1781	1777	1722
Q Serve(g_s), s	8.6	2.6	8.8	1.3	5.4	12.4	9.0	14.4	14.4	4.5	7.0	7.3
Cycle Q Clear(g_c), s	8.6	2.6	8.8	1.3	5.4	12.4	9.0	14.4	14.4	4.5	7.0	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.48
Lane Grp Cap(c), veh/h	137	683	427	35	288	244	160	812	838	105	757	733
V/C Ratio(X)	0.96	0.15	0.36	0.69	0.39	0.83	1.07	0.46	0.46	0.78	0.26	0.26
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	812	838	160	757	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	31.1	26.5	48.7	38.1	41.0	45.5	18.7	18.7	46.4	18.5	18.6
Incr Delay (d2), s/veh	65.5	0.1	0.5	8.8	0.9	7.0	89.9	1.9	1.8	5.9	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	1.0	2.8	0.7	2.5	5.2	7.9	6.1	6.3	2.2	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.9	31.2	27.0	57.5	38.9	48.0	135.4	20.5	20.5	52.3	19.3	19.5
LnGrp LOS	F	C	C	E	D	D	F	C	C	D	B	B
Approach Vol, veh/h		386			339			928			470	
Approach Delay, s/veh		56.8			45.6			41.7			25.1	
Approach LOS		E			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	51.7	15.0	21.4	15.0	48.6	7.9	28.5				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	29.0	9.0	29.0	9.0	29.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	6.5	16.4	10.6	14.4	11.0	9.3	3.3	10.8				
Green Ext Time (p_c), s	0.0	4.9	0.0	1.1	0.0	3.0	0.0	1.0				

Intersection Summary												
HCM 6th Ctrl Delay			41.4									
HCM 6th LOS			D									

Intersection

Intersection Delay, s/veh 8.3

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	0	4	14	0	0	0	12	34	273	31	86	16
Future Vol, veh/h	0	4	14	0	0	0	12	34	273	31	86	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	4	15	0	0	0	13	36	290	33	91	17
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	8.4	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	4%	0%	23%
Vol Thru, %	11%	22%	65%
Vol Right, %	86%	78%	12%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	319	18	133
LT Vol	12	0	31
Through Vol	34	4	86
RT Vol	273	14	16
Lane Flow Rate	339	19	141
Geometry Grp	1	1	1
Degree of Util (X)	0.336	0.023	0.165
Departure Headway (Hd)	3.567	4.405	4.196
Convergence, Y/N	Yes	Yes	Yes
Cap	1001	817	852
Service Time	1.611	2.405	2.237
HCM Lane V/C Ratio	0.339	0.023	0.165
HCM Control Delay	8.4	7.5	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.5	0.1	0.6

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↑			↑
Traffic Vol, veh/h	0	0	0	0	164	2	173	13	285	0	0	11
Future Vol, veh/h	0	0	0	0	164	2	173	13	285	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	198	2	208	16	343	0	0	13

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	-	0 206 200
Stage 1	-	-	0 0
Stage 2	-	-	206 200
Critical Hdwy	-	-	7.12 6.52
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	6.12 5.52
Follow-up Hdwy	-	-	3.518 4.018
Pot Cap-1 Maneuver	0	-	752 696 0 0 0 842
Stage 1	0	-	- - 0 0 0 -
Stage 2	0	-	796 736 0 0 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	-	-	740 696 - - - 842
Mov Cap-2 Maneuver	-	-	740 696 - - - -
Stage 1	-	-	- - - - - -
Stage 2	-	-	783 736 - - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	11.8	9.3
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	740	-	-	-	842
HCM Lane V/C Ratio	0.282	-	-	-	0.016
HCM Control Delay (s)	11.8	0	-	-	9.3
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	1.2	-	-	-	0

HCM 6th Signalized Intersection Summary

5: Center Dr & Jackson Dr

Existing + Cumulative AM

10/07/2021

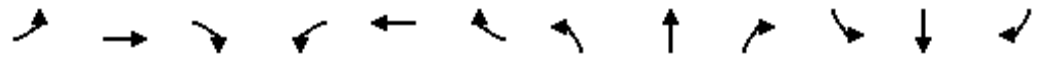


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	450	89	114	540	97	81	37	59	75	32	61
Future Volume (veh/h)	134	450	89	114	540	97	81	37	59	75	32	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	484	96	123	581	104	87	40	63	81	34	66
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	974	522	158	923	503	191	285	383	103	291	410
Arrive On Green	0.10	0.27	0.27	0.09	0.26	0.26	0.06	0.15	0.15	0.06	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	144	484	96	123	581	104	87	40	63	81	34	66
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.1	5.9	2.2	3.5	7.5	2.5	1.3	1.0	1.6	2.3	0.8	1.7
Cycle Q Clear(g_c), s	4.1	5.9	2.2	3.5	7.5	2.5	1.3	1.0	1.6	2.3	0.8	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	974	522	158	923	503	191	285	383	103	291	410
V/C Ratio(X)	0.78	0.50	0.18	0.78	0.63	0.21	0.46	0.14	0.16	0.78	0.12	0.16
Avail Cap(c_a), veh/h	262	1776	880	262	1776	884	509	978	970	262	978	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	15.7	12.4	23.0	16.9	12.9	23.6	18.9	15.5	24.0	18.8	14.8
Incr Delay (d2), s/veh	9.3	0.4	0.2	7.9	0.7	0.2	1.7	0.2	0.2	12.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.2	0.7	1.7	2.8	0.8	0.5	0.4	0.5	1.3	0.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	16.1	12.5	30.9	17.6	13.1	25.3	19.2	15.7	36.1	18.9	15.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		724			808			190				181
Approach Delay, s/veh		18.8			19.1			20.8				25.2
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	20.2	7.9	14.0	10.3	19.4	8.0	13.9				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+I1), s	5.5	7.9	3.3	3.7	6.1	9.5	4.3	3.6				
Green Ext Time (p_c), s	0.1	3.3	0.1	0.3	0.1	3.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay					19.7							
HCM 6th LOS					B							

HCM 6th Signalized Intersection Summary
1: Spring St & I-8 Ramp

Existing + Cumulative PM

10/05/2021






























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↕		↖	↗	
Traffic Volume (veh/h)	69	3	4	0	0	0	0	645	226	118	275	0
Future Volume (veh/h)	69	3	4	0	0	0	0	645	226	118	275	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	82	4	5				0	768	269	140	327	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	104	5	6				0	1701	596	173	1507	0
Arrive On Green	0.07	0.07	0.07				0.00	0.66	0.66	0.10	0.81	0.00
Sat Flow, veh/h	1406	69	86				0	2674	904	1781	1870	0
Grp Volume(v), veh/h	91	0	0				0	529	508	140	327	0
Grp Sat Flow(s),veh/h/ln	1560	0	0				0	1777	1708	1781	1870	0
Q Serve(g_s), s	5.7	0.0	0.0				0.0	14.4	14.5	7.7	4.1	0.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0				0.0	14.4	14.5	7.7	4.1	0.0
Prop In Lane	0.90		0.05				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	116	0	0				0	1171	1125	173	1507	0
V/C Ratio(X)	0.79	0.00	0.00				0.00	0.45	0.45	0.81	0.22	0.00
Avail Cap(c_a), veh/h	343	0	0				0	1171	1125	303	1507	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.5	0.0	0.0				0.0	8.3	8.3	44.3	2.3	0.0
Incr Delay (d2), s/veh	11.1	0.0	0.0				0.0	1.3	1.3	8.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0				0.0	5.4	5.2	3.8	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.0	0.0				0.0	9.5	9.6	53.0	2.6	0.0
LnGrp LOS	E	A	A				A	A	A	D	A	A
Approach Vol, veh/h		91						1037			467	
Approach Delay, s/veh		56.7						9.6			17.7	
Approach LOS		E						A			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	14.7	71.9		13.4		86.6						
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	17.0	44.0		22.0		66.0						
Max Q Clear Time (g_c+I1), s	9.7	16.5		7.7		6.1						
Green Ext Time (p_c), s	0.2	8.1		0.3		2.2						
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
2: Spring St & Baltimore Dr/Univeristy Ave

Existing + Cumulative PM

10/11/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Traffic Volume (veh/h)	163	106	254	44	132	155	139	562	13	134	701	104
Future Volume (veh/h)	163	106	254	44	132	155	139	562	13	134	701	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	179	116	279	48	145	170	153	618	14	147	770	114
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	644	409	61	293	248	160	1504	34	160	1315	195
Arrive On Green	0.09	0.21	0.21	0.03	0.16	0.16	0.09	0.42	0.42	0.09	0.42	0.42
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3552	80	1781	3105	460
Grp Volume(v), veh/h	179	116	279	48	145	170	153	309	323	147	441	443
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1856	1781	1777	1788
Q Serve(g_s), s	9.0	3.1	18.1	2.7	7.1	10.1	8.6	12.1	12.1	8.2	19.0	19.0
Cycle Q Clear(g_c), s	9.0	3.1	18.1	2.7	7.1	10.1	8.6	12.1	12.1	8.2	19.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.26
Lane Grp Cap(c), veh/h	137	644	409	61	293	248	160	752	786	160	752	757
V/C Ratio(X)	1.31	0.18	0.68	0.78	0.50	0.69	0.95	0.41	0.41	0.92	0.59	0.59
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	752	786	160	752	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	32.3	30.7	47.9	38.6	39.8	45.3	20.1	20.1	45.1	22.1	22.1
Incr Delay (d2), s/veh	180.3	0.1	2.6	7.8	1.3	3.3	57.0	1.7	1.6	46.7	3.3	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	1.1	6.0	1.3	3.3	4.1	6.2	5.2	5.4	5.6	8.3	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	225.8	32.4	33.3	55.7	39.9	43.2	102.3	21.8	21.7	91.8	25.4	25.4
LnGrp LOS	F	C	C	E	D	D	F	C	C	F	C	C
Approach Vol, veh/h		574			363			785			1031	
Approach Delay, s/veh		93.1			43.5			37.4			34.9	
Approach LOS		F			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	48.3	15.0	21.7	15.0	48.3	9.5	27.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	29.0	9.0	29.0	9.0	29.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	10.2	14.1	11.0	12.1	10.6	21.0	4.7	20.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	1.2	0.0	4.2	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			48.9									
HCM 6th LOS			D									

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	1	16	15	0	0	0	13	12	230	55	62	20
Future Vol, veh/h	1	16	15	0	0	0	13	12	230	55	62	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	17	16	0	0	0	14	13	247	59	67	22
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	5%	3%	40%
Vol Thru, %	5%	50%	45%
Vol Right, %	90%	47%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	255	32	137
LT Vol	13	1	55
Through Vol	12	16	62
RT Vol	230	15	20
Lane Flow Rate	274	34	147
Geometry Grp	1	1	1
Degree of Util (X)	0.272	0.043	0.172
Departure Headway (Hd)	3.574	4.493	4.194
Convergence, Y/N	Yes	Yes	Yes
Cap	995	802	850
Service Time	1.633	2.493	2.243
HCM Lane V/C Ratio	0.275	0.042	0.173
HCM Control Delay	8	7.7	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.1	0.1	0.6

Intersection

Int Delay, s/veh 4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↑			↑
Traffic Vol, veh/h	0	0	0	0	304	1	150	2	280	0	0	2
Future Vol, veh/h	0	0	0	0	304	1	150	2	280	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	334	1	165	2	308	0	0	2

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	-	0 336 335
Stage 1	-	-	0 0
Stage 2	-	-	336 335
Critical Hdwy	-	-	7.12 6.52
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	6.12 5.52
Follow-up Hdwy	-	-	3.518 4.018
Pot Cap-1 Maneuver	0	-	618 585 0 0 0 707
Stage 1	0	-	- - 0 0 0 -
Stage 2	0	-	678 643 0 0 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	-	-	616 585 - - - 707
Mov Cap-2 Maneuver	-	-	616 585 - - - -
Stage 1	-	-	- - - - - -
Stage 2	-	-	676 643 - - - -

























Approach	WB	NB	SB
HCM Control Delay, s	0	13	10.1
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	616	-	-	-	707
HCM Lane V/C Ratio	0.268	-	-	-	0.003
HCM Control Delay (s)	13	0	-	-	10.1
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	1.1	-	-	-	0

HCM 6th Signalized Intersection Summary
5: Center Dr & Jackson Dr

Existing + Cumulative PM

10/05/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	737	123	121	583	128	141	77	117	161	59	167
Future Volume (veh/h)	232	737	123	121	583	128	141	77	117	161	59	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	760	127	125	601	132	145	79	121	166	61	172
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1062	583	160	935	602	239	247	352	207	335	483
Arrive On Green	0.13	0.30	0.30	0.09	0.26	0.26	0.07	0.13	0.13	0.12	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	239	760	127	125	601	132	145	79	121	166	61	172
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.6	11.6	3.3	4.2	9.1	3.4	2.5	2.3	3.9	5.5	1.7	5.1
Cycle Q Clear(g_c), s	7.6	11.6	3.3	4.2	9.1	3.4	2.5	2.3	3.9	5.5	1.7	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1062	583	160	935	602	239	247	352	207	335	483
V/C Ratio(X)	1.07	0.72	0.22	0.78	0.64	0.22	0.61	0.32	0.34	0.80	0.18	0.36
Avail Cap(c_a), veh/h	223	1513	784	223	1513	859	433	833	849	223	833	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	19.0	13.2	27.0	19.8	12.7	27.4	23.8	19.9	26.1	21.1	16.4
Incr Delay (d2), s/veh	79.9	0.9	0.2	11.1	0.7	0.2	2.5	0.7	0.6	17.5	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	4.4	1.1	2.2	3.5	1.1	1.1	1.0	1.4	3.2	0.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.4	19.9	13.3	38.1	20.5	12.9	29.9	24.6	20.4	43.6	21.4	16.9
LnGrp LOS	F	B	B	D	C	B	C	C	C	D	C	B
Approach Vol, veh/h		1126			858			345			399	
Approach Delay, s/veh		37.5			21.9			25.4			28.7	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	24.1	9.2	16.9	12.6	21.9	12.0	14.0				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+I1), s	6.2	13.6	4.5	7.1	9.6	11.1	7.5	5.9				
Green Ext Time (p_c), s	0.0	4.5	0.1	0.8	0.0	4.0	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

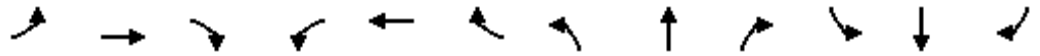
APPENDIX F

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING YEAR WITH PROJECT

HCM 6th Signalized Intersection Summary
1: Spring St & I-8 Ramp

Existing + Cumulative + Project AM

10/12/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↕		↖	↗	
Traffic Volume (veh/h)	111	2	0	0	0	0	0	833	235	69	155	0
Future Volume (veh/h)	111	2	0	0	0	0	0	833	235	69	155	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	2	0				0	877	247	73	163	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	147	3	0				0	1867	525	94	1468	0
Arrive On Green	0.10	0.10	0.00				0.00	0.68	0.68	0.05	0.78	0.00
Sat Flow, veh/h	1542	26	0				0	2832	770	1781	1870	0
Grp Volume(v), veh/h	119	0	0				0	569	555	73	163	0
Grp Sat Flow(s),veh/h/ln	1569	0	0				0	1777	1732	1781	1870	0
Q Serve(g_s), s	7.4	0.0	0.0				0.0	15.0	15.0	4.0	2.1	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0				0.0	15.0	15.0	4.0	2.1	0.0
Prop In Lane	0.98		0.00				0.00		0.44	1.00		0.00
Lane Grp Cap(c), veh/h	149	0	0				0	1211	1181	94	1468	0
V/C Ratio(X)	0.80	0.00	0.00				0.00	0.47	0.47	0.77	0.11	0.00
Avail Cap(c_a), veh/h	377	0	0				0	1211	1181	196	1468	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.3	0.0	0.0				0.0	7.4	7.5	46.8	2.5	0.0
Incr Delay (d2), s/veh	9.2	0.0	0.0				0.0	1.3	1.3	12.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0				0.0	5.4	5.3	2.1	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	0.0				0.0	8.8	8.8	59.3	2.7	0.0
LnGrp LOS	D	A	A				A	A	A	E	A	A
Approach Vol, veh/h		119						1124			236	
Approach Delay, s/veh		53.5						8.8			20.2	
Approach LOS		D						A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.3	74.2		15.5		84.5						
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	11.0	48.0		24.0		64.0						
Max Q Clear Time (g_c+I1), s	6.0	17.0		9.4		4.1						
Green Ext Time (p_c), s	0.1	9.3		0.5		1.0						
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
2: Spring St & Baltimore Dr/Univeristy Ave

Existing + Cumulative + Project AM

10/12/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	94	145	23	106	193	161	681	40	80	286	90
Future Volume (veh/h)	127	94	145	23	106	193	161	681	40	80	286	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	135	100	154	24	113	205	171	724	43	85	304	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	689	429	35	292	247	160	1544	92	108	1132	351
Arrive On Green	0.09	0.23	0.23	0.02	0.16	0.16	0.09	0.45	0.45	0.06	0.42	0.42
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3408	202	1781	2670	828
Grp Volume(v), veh/h	135	100	154	24	113	205	171	377	390	85	200	200
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1834	1781	1777	1721
Q Serve(g_s), s	8.8	2.6	8.8	1.3	5.4	12.5	9.0	14.7	14.8	4.7	7.3	7.6
Cycle Q Clear(g_c), s	8.8	2.6	8.8	1.3	5.4	12.5	9.0	14.7	14.8	4.7	7.3	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		0.48
Lane Grp Cap(c), veh/h	137	689	429	35	292	247	160	805	831	108	753	730
VC Ratio(X)	0.98	0.15	0.36	0.69	0.39	0.83	1.07	0.47	0.47	0.78	0.27	0.27
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	805	831	160	753	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	30.9	26.3	48.7	37.9	40.9	45.5	19.0	19.0	46.3	18.7	18.8
Incr Delay (d2), s/veh	72.1	0.1	0.5	8.8	0.8	7.0	89.9	2.0	1.9	7.6	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	2.8	0.7	2.5	5.3	7.9	6.2	6.4	2.3	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.5	31.0	26.8	57.5	38.7	47.9	135.4	20.9	20.9	53.9	19.6	19.7
LnGrp LOS	F	C	C	E	D	D	F	C	C	D	B	B
Approach Vol, veh/h		389			342			938			485	
Approach Delay, s/veh		59.4			45.5			41.8			25.6	
Approach LOS		E			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.1	51.3	15.0	21.6	15.0	48.4	7.9	28.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	9.0	29.0	9.0	29.0	9.0	29.0	29.0				
Max Q Clear Time (g_c+10), s	16.8	10.8	14.5	11.0	9.6	3.3	10.8					
Green Ext Time (p_c), s	0.0	4.9	0.0	1.1	0.0	3.1	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay											41.9	
HCM 6th LOS											D	

Intersection

Intersection Delay, s/veh 8.7

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	0	19	36	0	0	0	12	34	314	31	86	16
Future Vol, veh/h	0	19	36	0	0	0	12	34	314	31	86	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	38	0	0	0	13	36	334	33	91	17
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	9	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	0%	23%
Vol Thru, %	9%	35%	65%
Vol Right, %	87%	65%	12%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	360	55	133
LT Vol	12	0	31
Through Vol	34	19	86
RT Vol	314	36	16
Lane Flow Rate	383	59	141
Geometry Grp	1	1	1
Degree of Util (X)	0.386	0.074	0.169
Departure Headway (Hd)	3.627	4.578	4.302
Convergence, Y/N	Yes	Yes	Yes
Cap	977	787	822
Service Time	1.708	2.578	2.388
HCM Lane V/C Ratio	0.392	0.075	0.172
HCM Control Delay	9	7.9	8.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.8	0.2	0.6

Intersection												
Int Delay, s/veh	7.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↓			↓
Traffic Vol, veh/h	0	0	0	0	180	2	239	13	300	0	0	11
Future Vol, veh/h	0	0	0	0	180	2	239	13	300	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	217	2	288	16	361	0	0	13

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	0	225
Stage 1	-	0	0
Stage 2	-	225	219
Critical Hdwy	-	7.12	6.52
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	6.12	5.52
Follow-up Hdwy	-	3.518	4.018
Pot Cap-1 Maneuver	0	730	679
Stage 1	0	-	0
Stage 2	0	778	722
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	718	679
Mov Cap-2 Maneuver	-	718	679
Stage 1	-	-	-
Stage 2	-	765	722

























Approach	WB	NB	SB
HCM Control Delay, s	0	13.3	9.5
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	718	-	-	-	822
HCM Lane V/C Ratio	0.401	-	-	-	0.016
HCM Control Delay (s)	13.3	0	-	-	9.5
HCM Lane LOS	B	A	-	-	A
HCM 95th %tile Q(veh)	1.9	-	-	-	0

HCM 6th Signalized Intersection Summary
5: Center Dr & Jackson Dr

Existing + Cumulative + Project AM

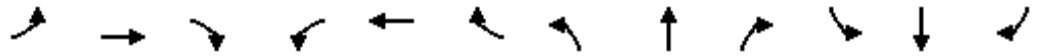
10/12/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	450	96	121	540	97	87	40	65	75	35	61
Future Volume (veh/h)	134	450	96	121	540	97	87	40	65	75	35	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	484	103	130	581	104	94	43	70	81	38	66
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	956	517	167	922	503	198	286	391	103	288	408
Arrive On Green	0.10	0.27	0.27	0.09	0.26	0.26	0.06	0.15	0.15	0.06	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	144	484	103	130	581	104	94	43	70	81	38	66
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	4.1	6.0	2.4	3.7	7.5	2.5	1.4	1.0	1.8	2.3	0.9	1.7
Cycle Q Clear(g_c), s	4.1	6.0	2.4	3.7	7.5	2.5	1.4	1.0	1.8	2.3	0.9	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	956	517	167	922	503	198	286	391	103	288	408
V/C Ratio(X)	0.78	0.51	0.20	0.78	0.63	0.21	0.47	0.15	0.18	0.78	0.13	0.16
Avail Cap(c_a), veh/h	262	1775	883	262	1775	884	508	978	977	262	978	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	16.0	12.5	22.9	16.9	12.9	23.6	19.0	15.3	24.0	18.9	14.9
Incr Delay (d2), s/veh	9.3	0.4	0.2	7.5	0.7	0.2	1.8	0.2	0.2	12.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.2	0.8	1.8	2.8	0.8	0.6	0.4	0.6	1.3	0.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	16.4	12.7	30.4	17.6	13.1	25.4	19.2	15.5	36.2	19.1	15.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	D	B	B
Approach Vol, veh/h		731			815			207			185	
Approach Delay, s/veh		18.9			19.1			20.8			25.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	19.9	8.0	13.9	10.3	19.4	8.0	13.9				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+I1), s	5.7	8.0	3.4	3.7	6.1	9.5	4.3	3.8				
Green Ext Time (p_c), s	0.1	3.4	0.1	0.3	0.1	3.9	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay				19.8								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
1: Spring St & I-8 Ramp

Existing + Cumulative + Project PM

10/05/2021

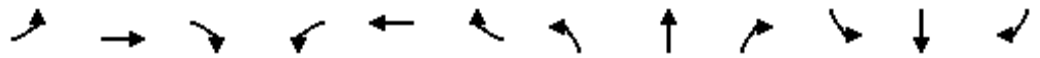


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕		↕	↕	
Traffic Volume (veh/h)	80	3	4	0	0	0	0	652	226	131	284	0
Future Volume (veh/h)	80	3	4	0	0	0	0	652	226	131	284	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1646	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	95	4	5				0	776	269	156	338	0
Peak Hour Factor	0.84	0.84	0.84				0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	120	5	6				0	1655	574	190	1489	0
Arrive On Green	0.08	0.08	0.08				0.00	0.64	0.64	0.11	0.80	0.00
Sat Flow, veh/h	1426	60	75				0	2682	897	1781	1870	0
Grp Volume(v), veh/h	104	0	0				0	533	512	156	338	0
Grp Sat Flow(s),veh/h/ln	1561	0	0				0	1777	1709	1781	1870	0
Q Serve(g_s), s	6.5	0.0	0.0				0.0	15.4	15.4	8.6	4.5	0.0
Cycle Q Clear(g_c), s	6.5	0.0	0.0				0.0	15.4	15.4	8.6	4.5	0.0
Prop In Lane	0.91		0.05				0.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	131	0	0				0	1136	1093	190	1489	0
V/C Ratio(X)	0.79	0.00	0.00				0.00	0.47	0.47	0.82	0.23	0.00
Avail Cap(c_a), veh/h	343	0	0				0	1136	1093	306	1489	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	44.9	0.0	0.0				0.0	9.3	9.3	43.8	2.5	0.0
Incr Delay (d2), s/veh	10.2	0.0	0.0				0.0	1.4	1.4	9.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0				0.0	5.9	5.7	4.2	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	0.0	0.0				0.0	10.7	10.7	52.9	2.9	0.0
LnGrp LOS	E	A	A				A	B	B	D	A	A
Approach Vol, veh/h		104						1045			494	
Approach Delay, s/veh		55.1						10.7			18.7	
Approach LOS		E						B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	15.6	70.0		14.4		85.6						
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	17.2	43.8		22.0		66.0						
Max Q Clear Time (g_c+I1), s	10.6	17.4		8.5		6.5						
Green Ext Time (p_c), s	0.2	8.0		0.4		2.3						
Intersection Summary												
HCM 6th Ctrl Delay			15.9									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
2: Spring St & Baltimore Dr/Univeristy Ave

Existing + Cumulative + Project PM

10/11/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	106	254	44	132	156	139	567	13	136	706	106
Future Volume (veh/h)	164	106	254	44	132	156	139	567	13	136	706	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1600	1600	1600	1870	1870	1870	1870	1870	1870	1870	1870	1646
Adj Flow Rate, veh/h	180	116	279	48	145	171	153	623	14	149	776	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	137	644	409	61	293	248	160	1505	34	160	1313	196
Arrive On Green	0.09	0.21	0.21	0.03	0.16	0.16	0.09	0.42	0.42	0.09	0.42	0.42
Sat Flow, veh/h	1523	3039	1356	1781	1870	1585	1781	3553	80	1781	3100	463
Grp Volume(v), veh/h	180	116	279	48	145	171	153	311	326	149	445	447
Grp Sat Flow(s),veh/h/ln	1523	1520	1356	1781	1870	1585	1781	1777	1856	1781	1777	1787
Q Serve(g_s), s	9.0	3.1	18.1	2.7	7.1	10.2	8.6	12.3	12.3	8.3	19.2	19.3
Cycle Q Clear(g_c), s	9.0	3.1	18.1	2.7	7.1	10.2	8.6	12.3	12.3	8.3	19.2	19.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.26
Lane Grp Cap(c), veh/h	137	644	409	61	293	248	160	752	786	160	752	757
V/C Ratio(X)	1.31	0.18	0.68	0.78	0.50	0.69	0.95	0.41	0.41	0.93	0.59	0.59
Avail Cap(c_a), veh/h	137	881	515	160	542	460	160	752	786	160	752	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	32.3	30.7	47.9	38.6	39.9	45.3	20.1	20.2	45.2	22.2	22.2
Incr Delay (d2), s/veh	183.1	0.1	2.6	7.8	1.3	3.4	57.0	1.7	1.6	50.0	3.4	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	1.1	6.0	1.3	3.3	4.1	6.2	5.2	5.4	5.8	8.4	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.6	32.4	33.3	55.7	39.9	43.3	102.3	21.8	21.8	95.2	25.6	25.5
LnGrp LOS	F	C	C	E	D	D	F	C	C	F	C	C
Approach Vol, veh/h		575			364			790			1041	
Approach Delay, s/veh		94.2			43.5			37.4			35.5	
Approach LOS		F			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	48.3	15.0	21.7	15.0	48.3	9.5	27.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	29.0	9.0	29.0	9.0	29.0	9.0	29.0				
Max Q Clear Time (g_c+I1), s	10.3	14.3	11.0	12.2	10.6	21.3	4.7	20.1				
Green Ext Time (p_c), s	0.0	4.5	0.0	1.2	0.0	4.2	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	1	24	28	0	0	0	13	12	248	55	62	20
Future Vol, veh/h	1	24	28	0	0	0	13	12	248	55	62	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	26	30	0	0	0	14	13	267	59	67	22
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.2	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	5%	2%	40%
Vol Thru, %	4%	45%	45%
Vol Right, %	91%	53%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	273	53	137
LT Vol	13	1	55
Through Vol	12	24	62
RT Vol	248	28	20
Lane Flow Rate	294	57	147
Geometry Grp	1	1	1
Degree of Util (X)	0.294	0.071	0.174
Departure Headway (Hd)	3.61	4.498	4.25
Convergence, Y/N	Yes	Yes	Yes
Cap	980	801	835
Service Time	1.687	2.498	2.32
HCM Lane V/C Ratio	0.3	0.071	0.176
HCM Control Delay	8.2	7.8	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.2	0.6

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑		↓		↑			↑
Traffic Vol, veh/h	0	0	0	0	311	1	178	2	288	0	0	2
Future Vol, veh/h	0	0	0	0	311	1	178	2	288	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	-	0	-	45	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	342	1	196	2	316	0	0	2

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	-	-	0 344 343 - - - 343
Stage 1	-	-	- 0 0 - - - -
Stage 2	-	-	- 344 343 - - - -
Critical Hdwy	-	-	- 7.12 6.52 - - - 6.22
Critical Hdwy Stg 1	-	-	- - - - - - - -
Critical Hdwy Stg 2	-	-	- 6.12 5.52 - - - -
Follow-up Hdwy	-	-	- 3.518 4.018 - - - 3.318
Pot Cap-1 Maneuver	0	-	- 610 579 0 0 0 700
Stage 1	0	-	- - - - 0 0 0 -
Stage 2	0	-	- 671 637 0 0 0 -
Platoon blocked, %	-	-	- - - - - - - -
Mov Cap-1 Maneuver	-	-	- 608 579 - - - 700
Mov Cap-2 Maneuver	-	-	- 608 579 - - - -
Stage 1	-	-	- - - - - - - -
Stage 2	-	-	- 669 637 - - - -

























Approach	WB	NB	SB
HCM Control Delay, s	0	13.7	10.2
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	WBT	WBR	SBLn1
Capacity (veh/h)	608	-	-	-	700
HCM Lane V/C Ratio	0.322	-	-	-	0.003
HCM Control Delay (s)	13.7	0	-	-	10.2
HCM Lane LOS	B	A	-	-	B
HCM 95th %tile Q(veh)	1.4	-	-	-	0

HCM 6th Signalized Intersection Summary
5: Center Dr & Jackson Dr

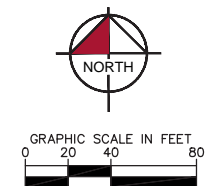
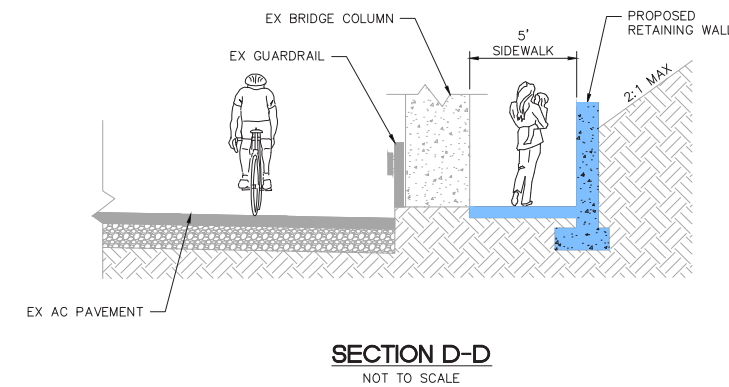
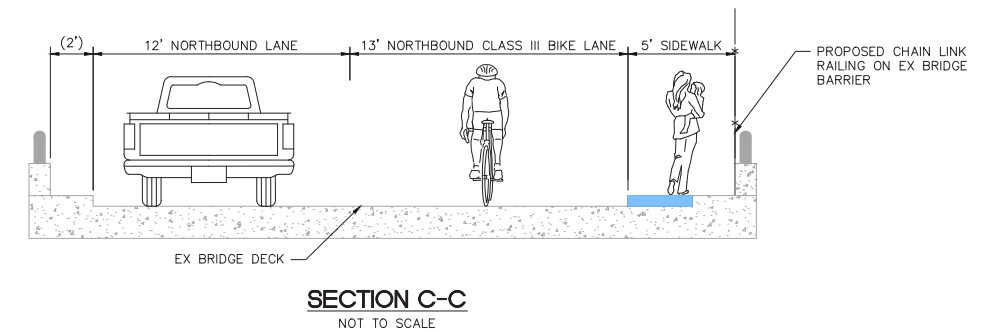
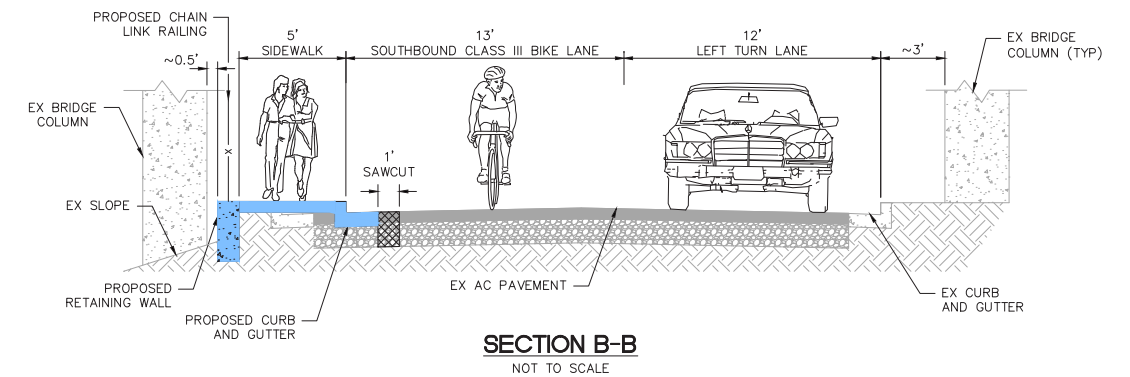
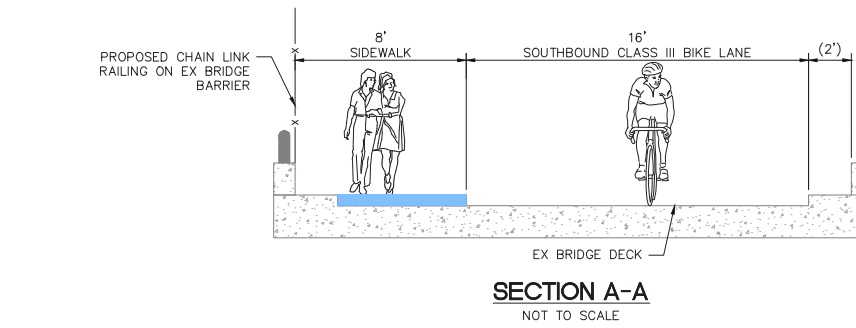
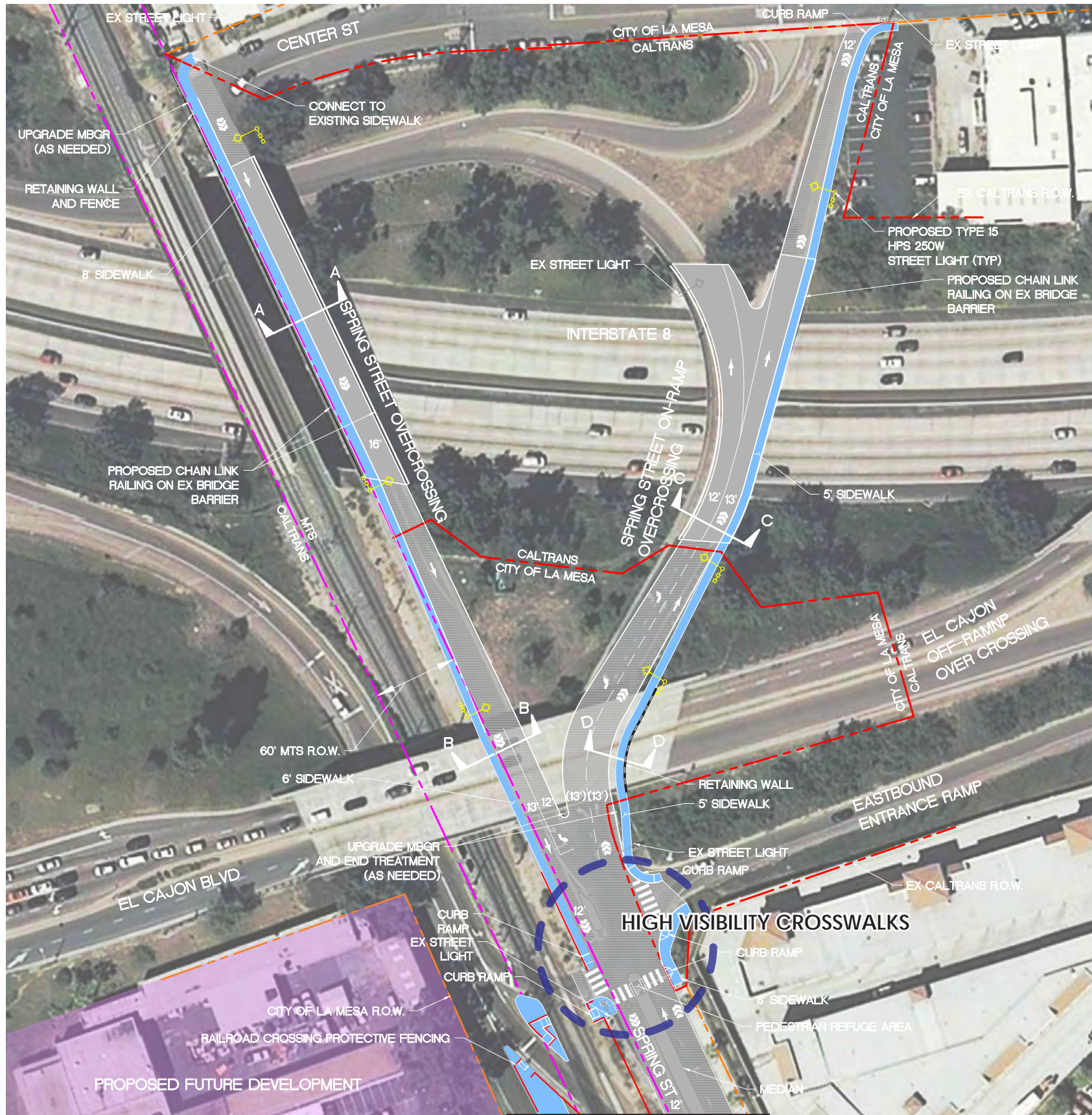
Existing + Cumulative + Project PM

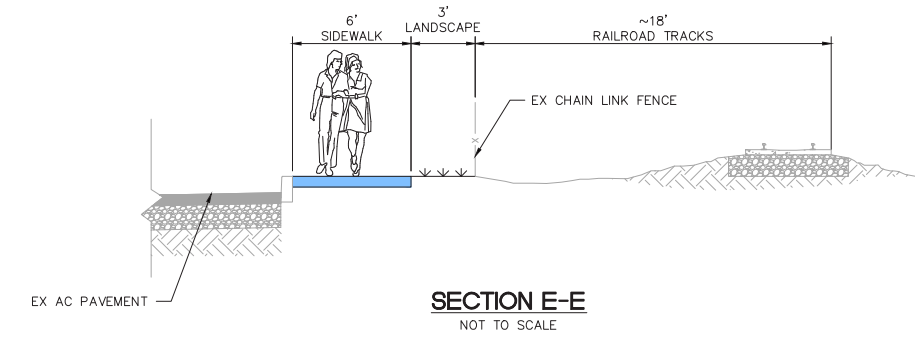
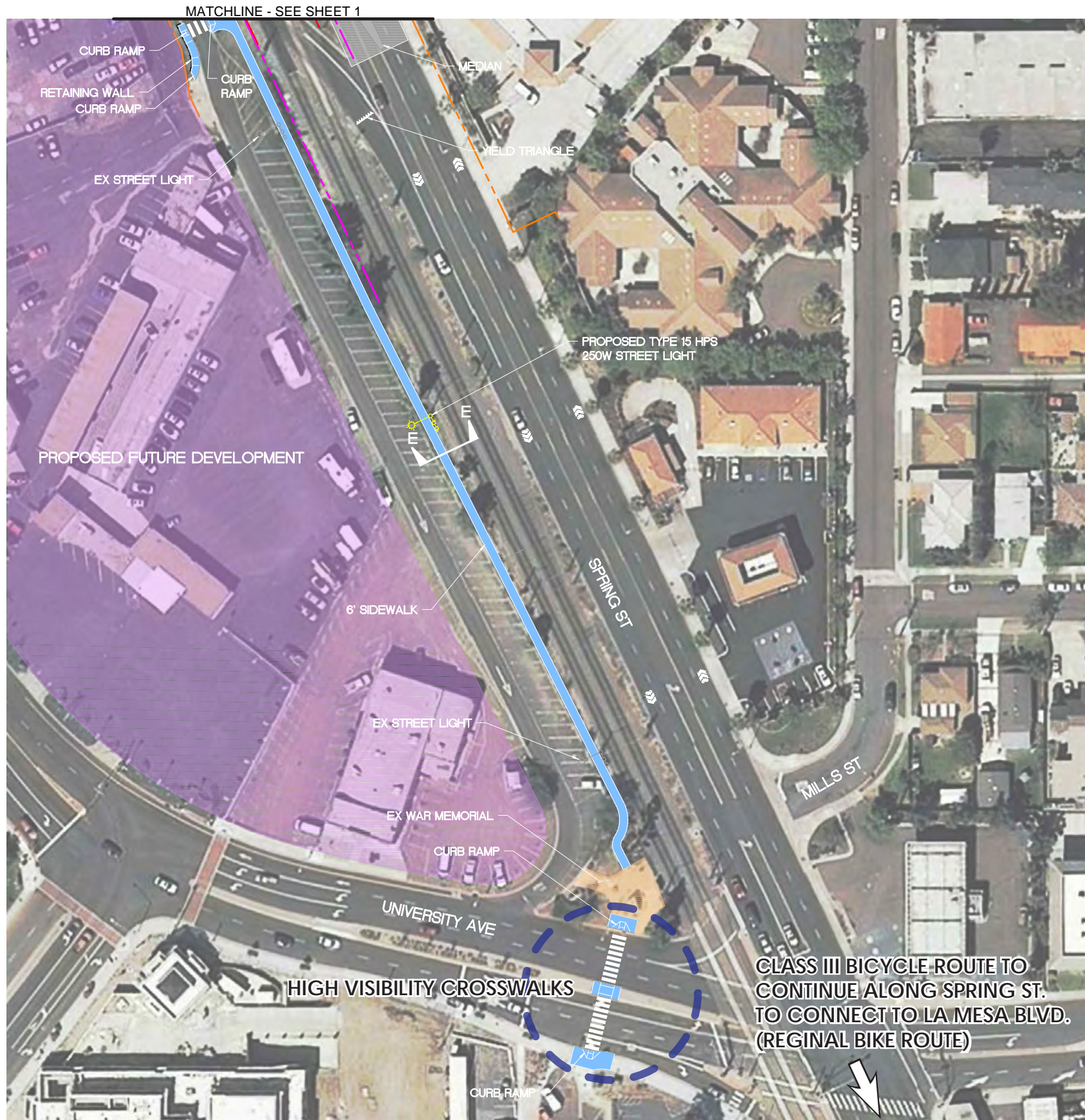
10/05/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	737	126	124	583	128	144	79	120	161	60	167
Future Volume (veh/h)	232	737	126	124	583	128	144	79	120	161	60	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	760	130	128	601	132	148	81	124	166	62	172
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1061	584	164	943	605	242	246	354	207	332	480
Arrive On Green	0.12	0.30	0.30	0.09	0.27	0.27	0.07	0.13	0.13	0.12	0.18	0.18
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	239	760	130	128	601	132	148	81	124	166	62	172
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.6	11.6	3.4	4.3	9.1	3.4	2.5	2.4	4.0	5.5	1.7	5.2
Cycle Q Clear(g_c), s	7.6	11.6	3.4	4.3	9.1	3.4	2.5	2.4	4.0	5.5	1.7	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1061	584	164	943	605	242	246	354	207	332	480
V/C Ratio(X)	1.07	0.72	0.22	0.78	0.64	0.22	0.61	0.33	0.35	0.80	0.19	0.36
Avail Cap(c_a), veh/h	223	1508	784	223	1508	857	432	831	849	223	831	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	19.0	13.2	27.0	19.7	12.7	27.5	24.0	19.9	26.2	21.3	16.6
Incr Delay (d2), s/veh	81.2	0.9	0.2	11.8	0.7	0.2	2.5	0.8	0.6	17.6	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	4.5	1.1	2.3	3.5	1.1	1.1	1.1	1.4	3.2	0.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.8	20.0	13.4	38.8	20.5	12.9	29.9	24.7	20.5	43.8	21.5	17.0
LnGrp LOS	F	B	B	D	C	B	C	C	C	D	C	B
Approach Vol, veh/h		1129			861			353			400	
Approach Delay, s/veh		37.8			22.0			25.4			28.8	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	24.1	9.3	16.8	12.6	22.1	12.1	14.0				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0				
Max Green Setting (Gmax), s	7.6	25.8	7.6	27.0	7.6	25.8	7.6	27.0				
Max Q Clear Time (g_c+I1), s	6.3	13.6	4.5	7.2	9.6	11.1	7.5	6.0				
Green Ext Time (p_c), s	0.0	4.5	0.1	0.8	0.0	4.0	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay				29.9								
HCM 6th LOS				C								

APPENDIX G

EXCERPTS FROM THE *SMART GROWTH – PEDESTRIAN AND BICYCLE IMPROVEMENTS, NORTH SPRING STREET AND ROUTES 1 AND 852 MAPS AND SCHEDULES*





ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	\$2.50
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$1.25
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$2.50
DAY PASS (Regional) / Pase diario (Regional)	
Adult / Adulto	\$6.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$3.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$3.00

MONTHLY PASSES / Pases mensuales

Adult / Adulto	\$72.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$23.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$23.00

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

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Fashion Valley Transit Ctr. – Downtown La Mesa
via El Cajon Bl.

DESTINATIONS

- Campus Plaza
- Copley-Price Family YMCA
- Hillcrest DMV
- Hoover High School
- The HUB Hillcrest Market

TROLLEY CONNECTIONS

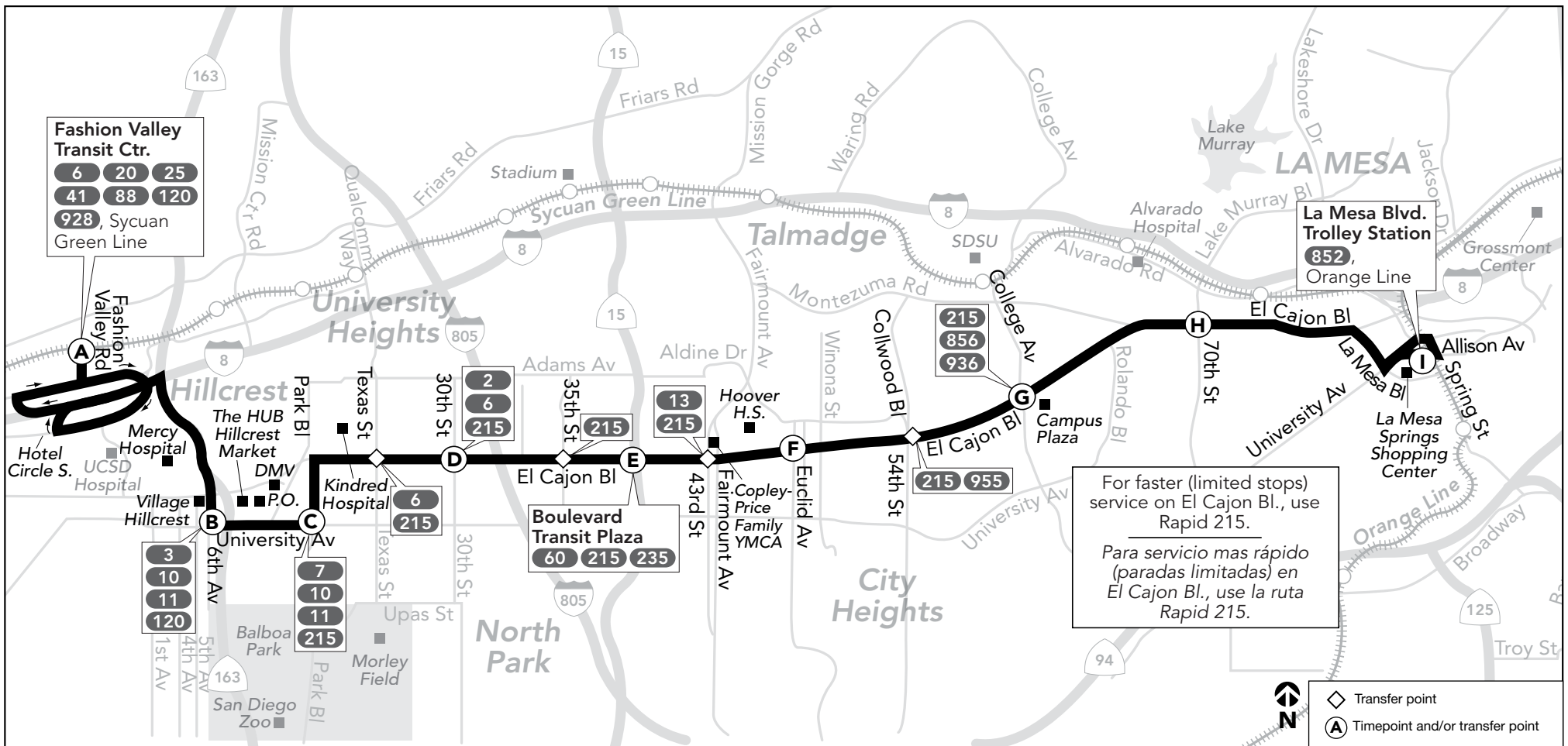
- La Mesa Bl.
- Fashion Valley



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For faster (limited stops) service on El Cajon Bl., use Rapid 215.
Para servicio más rápido (paradas limitadas) en El Cajon Bl., use la ruta Rapid 215.

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays >>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

Route 1 – Sunday / domingo

Fashion Valley ➔ City Heights ➔ La Mesa								
(A) Fashion Valley Transit Ctr.	(B) University Av. & 6th Av.	(C) Park Bl. & University Av.	(D) El Cajon Bl. & 30th St.	(E) El Cajon Bl. & I-15	(F) El Cajon Bl. & Euclid Av.	(G) El Cajon Bl. & College Av.	(H) El Cajon Bl. & 70th St.	(I) La Mesa Bl. Trolley Station
DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	ARRIVE
6:16a	6:22a	6:27a	6:33a	6:39a	6:45a	6:52a	6:57a	7:06a
7:10	7:16	7:22	7:29	7:36	7:43	7:50	7:56	8:06
8:10	8:16	8:22	8:29	8:36	8:43	8:50	8:56	9:06
8:37	8:43	8:50	8:57	9:04	9:11	9:19	9:25	9:35
9:07	9:13	9:20	9:27	9:34	9:41	9:49	9:55	10:05
9:37	9:43	9:50	9:57	10:04	10:11	10:19	10:25	10:35
10:07	10:13	10:20	10:28	10:35	10:43	10:51	10:58	11:08
10:40	10:47	10:54	11:02	11:09	11:17	11:26	11:34	11:45
11:10	11:17	11:24	11:32	11:39	11:47	11:56	12:04p	12:15p
11:40	11:47	11:54	12:02p	12:09p	12:17p	12:26p	12:34	12:45
12:08p	12:16p	12:24p	12:33	12:41	12:49	12:58	1:06	1:17
12:38	12:46	12:54	1:03	1:11	1:19	1:28	1:36	1:47
1:08	1:16	1:24	1:33	1:41	1:49	1:58	2:06	2:17
1:38	1:46	1:54	2:03	2:11	2:19	2:28	2:36	2:47
2:08	2:16	2:24	2:33	2:41	2:49	2:58	3:06	3:17
2:38	2:46	2:54	3:03	3:11	3:19	3:28	3:36	3:47
3:08	3:16	3:24	3:33	3:41	3:49	3:58	4:06	4:17
3:38	3:46	3:54	4:03	4:11	4:19	4:28	4:36	4:47
4:08	4:16	4:24	4:33	4:41	4:49	4:58	5:06	5:17
4:38	4:46	4:54	5:03	5:11	5:19	5:28	5:36	5:47
5:08	5:16	5:24	5:33	5:41	5:49	5:58	6:06	6:17
5:40	5:48	5:56	6:05	6:13	6:21	6:29	6:36	6:47
6:10	6:18	6:26	6:35	6:43	6:50	6:57	7:04	7:14
6:40	6:48	6:56	7:05	7:13	7:20	7:27	7:34	7:44
7:10	7:17	7:25	7:34	7:41	7:48	7:55	8:02	8:12
8:12	8:19	8:26	8:35	8:41	8:48	8:55	9:01	9:10

La Mesa ➔ City Heights ➔ Fashion Valley								
(I) La Mesa Bl. Trolley Station	(H) El Cajon Bl. & 70th St.	(G) El Cajon Bl. & College Av.	(F) El Cajon Bl. & Euclid Av.	(E) El Cajon Bl. & I-15	(D) El Cajon Bl. & 30th St.	(C) Park Bl. & University Av.	(B) University Av. & 7th Av.	(A) Fashion Valley Transit Ctr.
DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	DEPART	ARRIVE
5:39a	5:45a	5:52a	5:57a	6:04a	6:08a	6:14a	6:18a	6:25a
6:45	6:51	6:58	7:04	7:11	7:16	7:23	7:27	7:35
7:45	7:53	8:00	8:06	8:13	8:19	8:27	8:32	8:41
8:20	8:28	8:36	8:43	8:51	8:57	9:05	9:10	9:19
8:50	8:58	9:06	9:13	9:21	9:27	9:35	9:40	9:49
9:20	9:28	9:36	9:43	9:51	9:57	10:05	10:10	10:19
9:50	9:58	10:06	10:13	10:21	10:27	10:35	10:40	10:49
10:20	10:28	10:36	10:43	10:51	10:57	11:05	11:10	11:19
10:50	10:58	11:06	11:13	11:21	11:27	11:35	11:40	11:49
11:18	11:26	11:34	11:42	11:50	11:56	12:05p	12:10p	12:19p
11:48	11:56	12:04p	12:12p	12:20p	12:26p	12:35	12:40	12:49
12:18p	12:26p	12:34	12:42	12:50	12:56	1:05	1:10	1:19
12:48	12:56	1:04	1:12	1:20	1:26	1:35	1:40	1:49
1:18	1:26	1:34	1:42	1:50	1:56	2:05	2:10	2:19
1:48	1:56	2:04	2:12	2:20	2:26	2:35	2:40	2:49
2:18	2:26	2:34	2:42	2:50	2:56	3:05	3:10	3:19
2:48	2:56	3:04	3:12	3:20	3:26	3:35	3:40	3:49
3:18	3:26	3:34	3:42	3:50	3:56	4:05	4:10	4:19
3:48	3:56	4:04	4:12	4:20	4:26	4:35	4:40	4:49
4:18	4:26	4:34	4:42	4:50	4:56	5:05	5:10	5:19
4:48	4:56	5:04	5:12	5:20	5:26	5:35	5:40	5:49
5:20	5:28	5:36	5:43	5:50	5:56	6:05	6:10	6:19
5:50	5:58	6:06	6:13	6:20	6:26	6:35	6:40	6:49
6:20	6:28	6:36	6:43	6:50	6:56	7:05	7:10	7:19
6:50	6:58	7:06	7:13	7:20	7:26	7:35	7:40	7:49
7:50	7:57	8:05	8:11	8:18	8:24	8:32	8:37	8:45

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.
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Route 1 – Monday through Friday / lunes a viernes

Fashion Valley ➔ City Heights ➔ La Mesa

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
FashionValley Transit Ctr. DEPART	University Av. & 6th Av.	Park Bl. & University Av.	El Cajon Bl. & 30th St.	El Cajon Bl. & I-15	El Cajon Bl. & Euclid Av.	El Cajon Bl. & College Av.	El Cajon Bl. & 70th St.	La Mesa Bl. Trolley Station ARRIVE
5:03a	5:09a	5:14a	5:20a	5:25a	5:30a	5:36a	5:41a	5:49a
5:33	5:39	5:44	5:50	5:55	6:00	6:06	6:11	6:19
6:03	6:09	6:14	6:20	6:26	6:31	6:38	6:43	6:51
6:25	6:31	6:36	6:42	6:48	6:54	7:01	7:06	7:15
6:40	6:46	6:52	6:58	7:05	7:11	7:18	7:23	7:32
6:55	7:01	7:07	7:14	7:21	7:28	7:35	7:41	7:51
7:10	7:16	7:22	7:29	7:36	7:43	7:50	7:56	8:06
7:25	7:31	7:37	7:44	7:51	7:58	8:05	8:11	8:21
7:40	7:46	7:52	7:59	8:06	8:13	8:20	8:26	8:36
7:55	8:01	8:07	8:14	8:21	8:28	8:35	8:41	8:51
8:10	8:16	8:22	8:29	8:36	8:43	8:50	8:56	9:06
8:25	8:31	8:37	8:44	8:51	8:58	9:05	9:11	9:21
8:38	8:44	8:51	8:58	9:05	9:12	9:20	9:26	9:36
8:53	8:59	9:06	9:13	9:20	9:27	9:35	9:41	9:51
9:08	9:14	9:21	9:28	9:35	9:42	9:50	9:56	10:06
9:23	9:29	9:36	9:43	9:50	9:57	10:05	10:11	10:21
9:38	9:44	9:51	9:58	10:05	10:12	10:20	10:26	10:36
9:52	9:58	10:05	10:13	10:20	10:28	10:36	10:43	10:53
10:07	10:13	10:20	10:28	10:35	10:43	10:51	10:58	11:08
10:22	10:28	10:35	10:43	10:50	10:58	11:06	11:13	11:23
10:40	10:47	10:54	11:02	11:09	11:17	11:26	11:34	11:45
10:55	11:02	11:09	11:17	11:24	11:32	11:41	11:49	12:00p
11:10	11:17	11:24	11:32	11:39	11:47	11:56	12:04p	12:15
11:25	11:32	11:39	11:47	11:54	12:02p	12:11p	12:19	12:30
11:40	11:47	11:54	12:02p	12:09p	12:17	12:26	12:34	12:45
11:55	12:02p	12:09p	12:17	12:24	12:32	12:41	12:49	1:00
12:07p	12:14	12:22	12:31	12:39	12:47	12:56	1:04	1:15
12:22	12:29	12:37	12:46	12:54	1:02	1:11	1:19	1:30
12:37	12:44	12:52	1:01	1:09	1:17	1:26	1:34	1:45
12:52	12:59	1:07	1:16	1:24	1:32	1:41	1:49	2:00
1:07	1:14	1:22	1:31	1:39	1:47	1:56	2:04	2:15
1:22	1:29	1:37	1:46	1:54	2:02	2:11	2:19	2:30
1:37	1:44	1:52	2:01	2:09	2:17	2:26	2:34	2:45
1:53	2:00	2:08	2:17	2:25	2:34	2:43	2:51	3:03
2:08	2:16	2:24	2:34	2:42	2:51	3:00	3:08	3:20
2:23	2:31	2:39	2:49	2:57	3:06	3:15	3:23	3:35
2:38	2:46	2:54	3:04	3:12	3:21	3:30	3:38	3:50
2:53	3:01	3:09	3:19	3:27	3:36	3:45	3:53	4:05
3:08	3:17	3:26	3:36	3:44	3:53	4:02	4:10	4:22
3:23	3:32	3:41	3:51	3:59	4:08	4:17	4:25	4:37
3:38	3:47	3:56	4:06	4:14	4:23	4:32	4:40	4:52
3:53	4:02	4:11	4:21	4:29	4:38	4:47	4:55	5:07
4:08	4:17	4:26	4:36	4:44	4:53	5:02	5:10	5:22
4:23	4:32	4:41	4:51	4:59	5:08	5:17	5:25	5:37
4:38	4:47	4:56	5:06	5:14	5:23	5:32	5:40	5:52
4:53	5:02	5:11	5:21	5:29	5:38	5:47	5:55	6:07
5:06	5:15	5:24	5:34	5:42	5:51	5:59	6:07	6:18
5:21	5:30	5:39	5:49	5:57	6:06	6:14	6:22	6:33
5:36	5:45	5:54	6:04	6:12	6:20	6:28	6:35	6:46
5:51	6:00	6:09	6:19	6:27	6:35	6:43	6:50	7:01
6:10	6:18	6:27	6:36	6:44	6:51	6:58	7:05	7:15
6:25	6:33	6:42	6:51	6:59	7:06	7:13	7:20	7:30
6:40	6:48	6:57	7:06	7:14	7:21	7:28	7:35	7:45
7:05	7:13	7:21	7:30	7:37	7:44	7:51	7:58	8:08
7:40	7:47	7:54	8:03	8:09	8:16	8:23	8:29	8:38
8:10	8:17	8:24	8:33	8:39	8:46	8:53	8:59	9:08
8:42	8:49	8:56	9:04	9:10	9:17	9:24	9:29	9:38
9:14	9:20	9:27	9:34	9:40	9:46	9:52	9:57	10:05
9:44	9:50	9:57	10:04	10:10	10:16	10:22	10:27	10:35
10:16	10:22	10:28	10:35	10:40	10:46	10:52	10:57	11:05
10:46	10:52	10:57	11:03	11:08	11:14	11:20	11:25	11:32
11:16	11:22	11:27	11:33	11:38	11:44	11:50	11:55	12:02a

La Mesa ➔ City Heights ➔ Fashion Valley

(I)	(H)	(G)	(F)	(E)	(D)	(C)	(B)	(A)
La Mesa Bl. Trolley Station DEPART	El Cajon Bl. & 70th St.	El Cajon Bl. & College Av.	El Cajon Bl. & Euclid Av.	El Cajon Bl. & I-15	El Cajon Bl. & 30th St.	Park Bl. & University Av.	University Av. & 7th Av.	FashionValley Transit Ctr. ARRIVE
—	—	4:46a	4:51a	4:58a	5:02a	5:08a	5:12a	5:19a
5:03a	5:09a	5:16	5:21	5:28	5:32	5:38	5:42	5:49
5:33	5:39	5:46	5:52	6:00	6:04	6:11	6:15	6:22
6:00	6:07	6:15	6:22	6:30	6:35	6:42	6:46	6:54
6:20	6:27	6:35	6:42	6:51	6:57	7:05	7:10	7:18
6:35	6:42	6:50	6:57	7:06	7:12	7:20	7:25	7:33
6:50	6:57	7:05	7:12	7:21	7:27	7:35	7:40	7:48
7:05	7:13	7:21	7:28	7:37	7:43	7:51	7:56	8:05
7:20	7:28	7:36	7:43	7:52	7:58	8:06	8:11	8:20
7:35	7:43	7:51	7:58	8:07	8:13	8:21	8:26	8:35
7:50	7:58	8:06	8:13	8:22	8:28	8:36	8:41	8:50
8:05	8:13	8:21	8:28	8:36	8:42	8:50	8:55	9:04
8:20	8:28	8:36	8:43	8:51	8:57	9:05	9:10	9:19
8:35	8:43	8:51	8:58	9:06	9:12	9:20	9:25	9:34
8:50	8:58	9:06	9:13	9:21	9:27	9:35	9:40	9:49
9:05	9:13	9:21	9:28	9:36	9:42	9:50	9:55	10:04
9:20	9:28	9:36	9:43	9:51	9:57	10:05	10:10	10:19
9:35	9:43	9:51	9:58	10:06	10:12	10:20	10:25	10:34
9:50	9:58	10:06	10:13	10:21	10:27	10:35	10:40	10:49
10:05	10:13	10:21	10:28	10:36	10:42	10:50	10:55	11:04
10:20	10:28	10:36	10:43	10:51	10:57	11:05	11:10	11:19
10:35	10:43	10:51	10:58	11:06	11:12	11:20	11:25	11:34
10:50	10:58	11:06	11:13	11:21	11:27	11:35	11:40	11:49
11:05	11:13	11:21	11:29	11:37	11:43	11:52	11:57	12:06p
11:20	11:28	11:36	11:44	11:52	11:58	12:07p	12:12p	12:21
11:35	11:43	11:51	11:59	12:07p	12:13p	12:22	12:27	12:36
11:50	11:58	12:06p	12:14p	12:22	12:28	12:37	12:42	12:51
12:05p	12:13p	12:21	12:29	12:37	12:43	12:52	12:57	1:06
12:20	12:28	12:36	12:44	12:52	12:58	1:07	1:12	1:21
12:35	12:43	12:51	12:59	1:07	1:13	1:22	1:27	1:36
12:50	12:58	1:06	1:14	1:22	1:28	1:37	1:42	1:51
1:05	1:13	1:21	1:29	1:37	1:43	1:52	1:57	2:06
1:20	1:28	1:36	1:44	1:52	1:58	2:07	2:12	2:21
1:35	1:43	1:51	1:59	2:07	2:13	2:22	2:27	2:36
1:50	1:58	2:06	2:14	2:22	2:28	2:37	2:42	2:51
2:02	2:11	2:19	2:27	2:36	2:43	2:52	2:57	3:06
2:17	2:26	2:34	2:42	2:51	2:58	3:07	3:12	3:21
2:32	2:41	2:49	2:57	3:06	3:13	3:22	3:27	3:36
2:47	2:56	3:04	3:12	3:21	3:28	3:37	3:42	3:51
3:02	3:11	3:19	3:27	3:36	3:43	3:52	3:57	4:06
3:17	3:26	3:34	3:42	3:51	3:58	4:07	4:12	4:21
3:32	3:41	3:49	3:57	4:06	4:13	4:22	4:27	4:36
3:47	3:56	4:04	4:12	4:21	4:28	4:37	4:42	4:51
4:02	4:11	4:19	4:27	4:36	4:43	4:52	4:57	5:06
4:17	4:26	4:34	4:42	4:51	4:58	5:07	5:12	5:21
4:32	4:41	4:49	4:57	5:06	5:13	5:22	5:27	5:36
4:47	4:56	5:04	5:12	5:21	5:28	5:37	5:42	5:51
5:02	5:11	5:19	5:27	5:36	5:43	5:52	5:57	6:06
5:17	5:25	5:33	5:40	5:48	5:55	6:04	6:09	6:18
5:32	5:40	5:48	5:55	6:03	6:10	6:19	6:24	6:33
5:47	5:55	6:03	6:10	6:18	6:25	6:34	6:39	6:48
6:02	6:10	6:18	6:25	6:33	6:40	6:49	6:54	7:03
6:17	6:25	6:33	6:40	6:48	6:55	7:03	7:09	7:18
6:32	6:40	6:48	6:55	7:03	7:10	7:19	7:24	7:33
7:02	7:10	7:18	7:25	7:33	7:40	7:49	7:54	8:03
7:32	7:39	7:47	7:53	8:00	8:06	8:14	8:19	8:27
8:02	8:09	8:16	8:22	8:29	8:34	8:41	8:45	8:53
8:32	8:39	8:46	8:52	8:59	9:04	9:11	9:15	9:23
9:02	9:09	9:16	9:22	9:29	9:34	9:41	9:45	9:53
9:32	9:38	9:45	9:51	9:58	10:03	10:10	10:14	10:21
10:05	10:11	10:17	10:22	10:29	10:33	10:40	10:44	10:51
10:35	10:41	10:47	10:52	10:59	11:03	11:10	11:14	11:21
11:07	11:13	11:19	11:24	11:30	11:34	11:40	11:44	11:51
11:37	11:43	11:49	11:54	12:00a	12:04a	12:10a	12:14a	—

Route 1 – Saturday / sábado

Fashion Valley ➔ City Heights ➔ La Mesa

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
FashionValley Transit Ctr. DEPART	University Av. & 6th Av.	Park Bl. & University Av.	El Cajon Bl. & 30th St.	El Cajon Bl. & I-15	El Cajon Bl. & Euclid Av.	El Cajon Bl. & College Av.	El Cajon Bl. & 70th St.	La Mesa Bl. Trolley Station ARRIVE
5:22a	5:28a	5:33a	5:39a	5:44a	5:49a	5:55a	6:00a	6:08a
6:03	6:09	6:14	6:20	6:26	6:3			

ONE-WAY FARES / Tarifas Sencillas

Exact fare, please / Favor de pagar la cantidad exacta	
Adult / Adulto	\$2.50
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$1.25
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$2.50
DAY PASS (Regional) / Pase diario (Regional)	
Adult / Adulto	\$6.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$3.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$3.00

MONTHLY PASSES / Pases mensuales

Adult / Adulto	\$72.00
Senior/Disabled/Medicare* Personas Mayores/con Discapacidades/Medicare*	\$23.00
Youth (ages 6-18)* Jóvenes (edades 6-18)*	\$23.00

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
*Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.

COMPASS CARDS / Tarjeta Compass
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Hay un costo de \$2 por la tarjeta Compass Card, la cual puede ser recargada para usos futuros.

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TTY/TDD (teletype for hearing impaired) Teletipo para sordos	(619) 234-5005 or/ó (888) 722-4889
InfoExpress (24-hour info via Touch-Tone phone) Información las 24 horas (vía teléfono de teclas)	(619) 685-4900
Customer Service / Suggestions Servicio al cliente / Sugerencias	(619) 557-4555
MTS Security MTS Seguridad	(619) 595-4960
Lost & Found Objetos extraviados	(619) 233-3004
Transit Store	(619) 234-1060 12th & Imperial Transit Center M-F 8am-5pm

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Thank you for riding MTS! ¡Gracias por viajar con MTS!

852

University Ave. / 54th St. – Grossmont Transit Center
via University Ave.

DESTINATIONS

- Colina Del Sol Park
- Downtown La Mesa
- Grossmont Center
- Joan Kroc Center
- Sharp Grossmont Hospital

TROLLEY CONNECTIONS

- La Mesa Bl.
- Grossmont

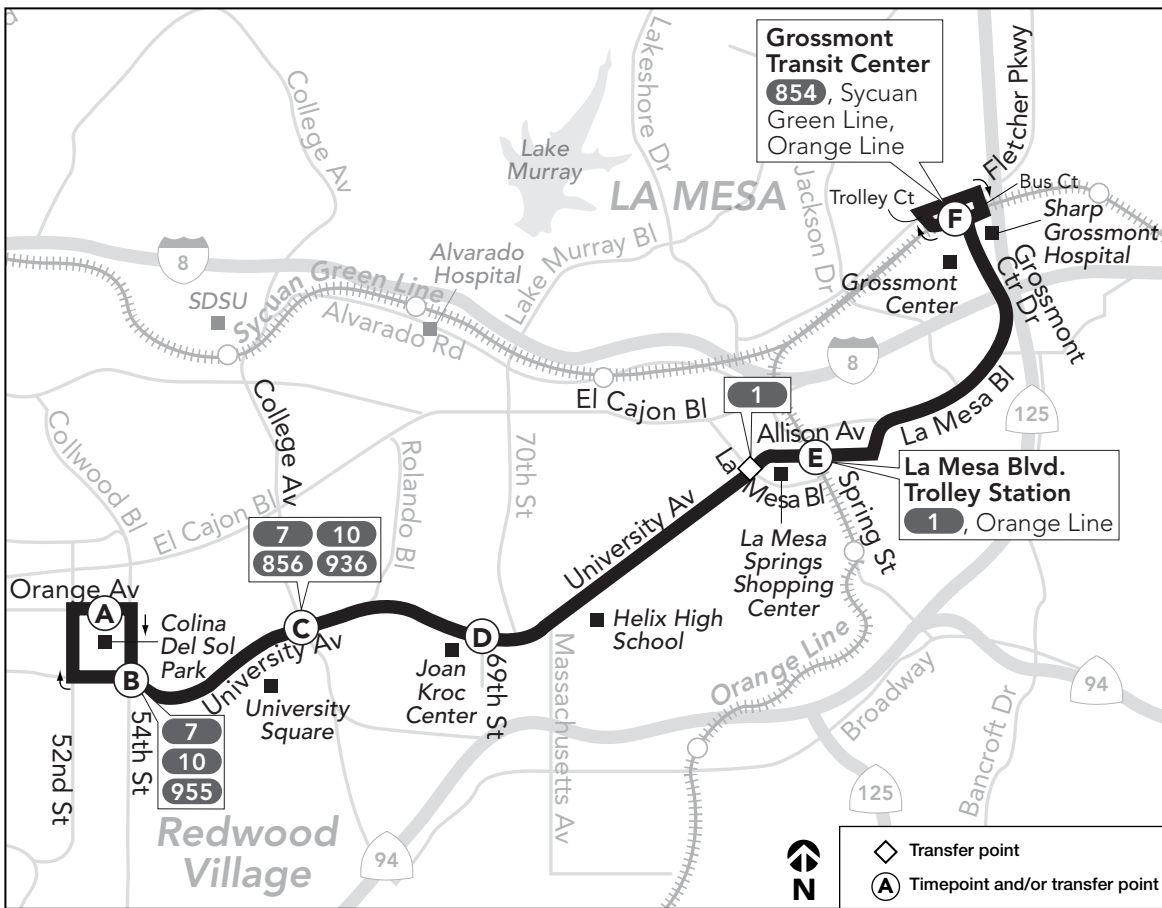


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Route Alerts, Updated Schedules, Connections & More



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Route 852 – Sunday / domingo

Redwood Village → La Mesa → Grossmont

(A)	(B)	(C)	(D)	(E)	(F)
Orange Av. & 54th St. DEPART	University Av. & 54th St.	University Av. & College Av.	University Av. & 69th St.	La Mesa Bl. Trolley Station	Grossmont Transit Ctr. ARRIVE
6:33a	6:35a	6:38a	6:41a	6:50a	7:00a
7:01	7:03	7:07	7:10	7:20	7:31
7:31	7:33	7:37	7:40	7:50	8:01
8:01	8:03	8:07	8:10	8:20	8:31
8:30	8:32	8:37	8:40	8:50	9:02
9:00	9:02	9:07	9:10	9:20	9:32
9:29	9:31	9:36	9:39	9:50	10:03
9:59	10:01	10:06	10:09	10:20	10:33
10:29	10:31	10:36	10:39	10:50	11:03
11:01	11:03	11:08	11:11	11:22	11:35
11:31	11:33	11:38	11:41	11:52	12:05p
12:01p	12:03p	12:08p	12:11p	12:22p	12:35
12:31	12:33	12:38	12:41	12:52	1:05
1:01	1:03	1:08	1:11	1:22	1:35
1:31	1:33	1:38	1:41	1:52	2:05
2:01	2:03	2:08	2:11	2:22	2:35
2:31	2:33	2:38	2:41	2:52	3:05
3:01	3:03	3:08	3:11	3:22	3:35
3:31	3:33	3:38	3:41	3:52	4:05
4:01	4:03	4:08	4:11	4:22	4:35
4:31	4:33	4:38	4:41	4:52	5:05
5:01	5:03	5:08	5:11	5:22	5:35
5:31	5:33	5:38	5:41	5:52	6:05
6:01	6:03	6:08	6:11	6:21	6:33
6:31	6:33	6:37	6:40	6:50	7:00
7:01	7:03	7:07	7:10	7:20	7:30
7:31	7:33	7:37	7:40	7:50	8:00
8:01	8:03	8:07	8:10	8:20	8:30
8:31	8:33	8:37	8:40	8:50	9:00
9:01	9:03	9:07	9:10	9:20	9:30

Grossmont → La Mesa → Redwood Village

(F)	(E)	(D)	(C)	(B)	(A)
Grossmont Transit Ctr. DEPART	La Mesa Bl. Trolley Station	University Av. & 69th St.	University Av. & College Av.	University Av. & 54th St.	Orange Av. & 54th St. ARRIVE
6:23a	6:33a	6:40a	6:43a	6:47a	6:50a
6:53	7:03	7:10	7:13	7:17	7:20
7:22	7:33	7:40	7:44	7:48	7:52
7:52	8:03	8:10	8:14	8:18	8:22
8:20	8:31	8:38	8:42	8:46	8:50
8:49	9:01	9:08	9:12	9:17	9:21
9:19	9:31	9:38	9:42	9:47	9:51
9:49	10:01	10:08	10:12	10:17	10:21
10:17	10:30	10:38	10:43	10:48	10:52
10:47	11:00	11:08	11:13	11:18	11:22
11:17	11:30	11:38	11:43	11:48	11:52
11:47	12:00p	12:08p	12:13p	12:18p	12:22p
12:17p	12:30	12:38	12:43	12:48	12:52
12:46	1:00	1:08	1:13	1:18	1:22
1:16	1:30	1:38	1:43	1:48	1:52
1:46	2:00	2:08	2:13	2:18	2:22
2:16	2:30	2:38	2:43	2:48	2:52
2:46	3:00	3:08	3:13	3:18	3:22
3:16	3:30	3:38	3:43	3:48	3:52
3:46	4:00	4:08	4:13	4:18	4:22
4:16	4:30	4:38	4:43	4:48	4:52
4:46	5:00	5:08	5:13	5:18	5:22
5:16	5:30	5:38	5:43	5:48	5:52
5:48	6:00	6:08	6:13	6:18	6:22
6:18	6:30	6:38	6:43	6:48	6:52
6:48	7:00	7:08	7:13	7:18	7:22
7:19	7:30	7:37	7:42	7:46	7:49
7:49	8:00	8:07	8:12	8:16	8:19
8:20	8:30	8:37	8:41	8:45	8:48
8:48	8:58	9:05	9:09	9:13	9:16

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas

Route 852 – Monday through Friday / lunes a viernes

Redwood Village → La Mesa → Grossmont

(A) Orange Av. & 54th St. DEPART	(B) University Av. & 54th St.	(C) University Av. & College Av.	(D) University Av. & 69th St.	(E) La Mesa Bl. Trolley Station	(F) Grossmont Transit Ctr. ARRIVE
5:02a	5:04a	5:08a	5:11a	5:21a	5:31a
5:34	5:36	5:40	5:43	5:53	6:03
6:03	6:05	6:09	6:12	6:23	6:34
6:31	6:33	6:38	6:41	6:52	7:04
6:57	6:59	7:04	7:07	7:18	7:30
7:25	7:27	7:32	7:35	7:47	8:00
7:55	7:57	8:02	8:05	8:17	8:30
8:25	8:27	8:32	8:35	8:47	9:00
8:55	8:57	9:02	9:05	9:17	9:30
9:25	9:27	9:32	9:35	9:47	10:00
9:55	9:57	10:02	10:05	10:17	10:30
10:25	10:27	10:33	10:36	10:48	11:01
10:55	10:57	11:03	11:06	11:18	11:31
11:25	11:27	11:33	11:36	11:48	12:01p
11:55	11:57	12:03p	12:06p	12:18p	12:31
12:25p	12:27p	12:33	12:36	12:48	1:01
12:55	12:57	1:03	1:06	1:18	1:31
1:25	1:27	1:33	1:36	1:48	2:01
1:55	1:57	2:03	2:06	2:18	2:31
2:25	2:27	2:33	2:36	2:48	3:01
2:55	2:57	3:03	3:06	3:18	3:31
3:25	3:27	3:33	3:36	3:48	4:01
3:55	3:57	4:03	4:06	4:18	4:31
4:25	4:27	4:33	4:36	4:48	5:01
4:55	4:57	5:03	5:06	5:18	5:31
5:25	5:27	5:33	5:36	5:48	6:01
6:00	6:02	6:07	6:10	6:21	6:33
6:30	6:32	6:37	6:40	6:51	7:03
7:00	7:02	7:07	7:10	7:21	7:33
7:30	7:32	7:36	7:39	7:50	8:01
8:00	8:02	8:06	8:09	8:20	8:31
8:30	8:32	8:36	8:39	8:50	9:01
9:00	9:02	9:06	9:09	9:19	9:29
9:30	9:32	9:36	9:39	9:49	9:59
10:01	10:03	10:07	10:10	10:20	10:30
10:33	10:35	10:38	10:41	10:51	11:00

Grossmont → La Mesa → Redwood Village

(F) Grossmont Transit Ctr. DEPART	(E) La Mesa Bl. Trolley Station	(D) University Av. & 69th St.	(C) University Av. & College Av.	(B) University Av. & 54th St.	(A) Orange Av. & 54th St. ARRIVE
5:08a	5:17a	5:24a	5:28a	5:32a	5:35a
5:41	5:51	5:58	6:03	6:07	6:10
6:12	6:22	6:29	6:34	6:38	6:41
6:42	6:54	7:02	7:07	7:12	7:15
7:12	7:25	7:34	7:39	7:44	7:48
7:42	7:55	8:04	8:09	8:14	8:18
8:09	8:22	8:31	8:36	8:41	8:45
8:39	8:52	9:01	9:06	9:11	9:15
9:09	9:22	9:31	9:36	9:41	9:45
9:39	9:52	10:01	10:06	10:11	10:15
10:09	10:22	10:31	10:36	10:41	10:45
10:39	10:52	11:01	11:06	11:11	11:15
11:09	11:24	11:33	11:38	11:43	11:47
11:39	11:54	12:03p	12:08p	12:13p	12:17p
12:09p	12:24p	12:33	12:38	12:43	12:47
12:39	12:54p	1:03	1:08	1:13	1:17
1:09	1:24	1:33	1:38	1:43	1:47
1:39	1:54	2:03	2:08	2:13	2:17
2:09	2:24	2:33	2:38	2:43	2:47
2:39	2:54	3:04	3:09	3:14	3:18
3:09	3:24	3:34	3:39	3:44	3:48
3:39	3:54	4:04	4:09	4:14	4:18
4:09	4:24	4:34	4:39	4:44	4:48
4:39	4:54	5:04	5:09	5:14	5:18
5:09	5:24	5:34	5:39	5:44	5:48
5:40	5:54	6:03	6:08	6:13	6:17
6:10	6:24	6:32	6:37	6:42	6:46
6:42	6:54	7:02	7:07	7:12	7:15
7:16	7:28	7:36	7:41	7:46	7:49
7:47	7:58	8:05	8:10	8:14	8:17
8:19	8:29	8:36	8:40	8:44	8:47
8:49	8:59	9:06	9:10	9:14	9:17
9:19	9:29	9:36	9:40	9:44	9:47
9:49	9:59	10:06	10:10	10:14	10:17
10:19	10:29	10:36	10:40	10:44	10:47
10:49	10:59	11:06	11:10	11:14	11:17

Route 852 – Saturday / sábado

Redwood Village → La Mesa → Grossmont

(A) Orange Av. & 54th St. DEPART	(B) University Av. & 54th St.	(C) University Av. & College Av.	(D) University Av. & 69th St.	(E) La Mesa Bl. Trolley Station	(F) Grossmont Transit Ctr. ARRIVE
6:33a	6:35a	6:38a	6:41a	6:50a	7:00a
7:01	7:03	7:07	7:10	7:20	7:31
7:31	7:33	7:37	7:40	7:50	8:01
8:01	8:03	8:07	8:10	8:20	8:31
8:30	8:32	8:37	8:40	8:50	9:02
9:00	9:02	9:07	9:10	9:20	9:32
9:29	9:31	9:36	9:39	9:50	10:03
9:59	10:01	10:06	10:09	10:20	10:33
10:29	10:31	10:36	10:39	10:50	11:03
11:01	11:03	11:08	11:11	11:22	11:35
11:31	11:33	11:38	11:41	11:52	12:05p
12:01p	12:03p	12:08p	12:11p	12:22p	12:35
12:31	12:33	12:38	12:41	12:52	1:05
1:01	1:03	1:08	1:11	1:22	1:35
1:31	1:33	1:38	1:41	1:52	2:05
2:01	2:03	2:08	2:11	2:22	2:35
2:31	2:33	2:38	2:41	2:52	3:05
3:01	3:03	3:08	3:11	3:22	3:35
3:31	3:33	3:38	3:41	3:52	4:05
4:01	4:03	4:08	4:11	4:22	4:35
4:31	4:33	4:38	4:41	4:52	5:05
5:01	5:03	5:08	5:11	5:22	5:35
5:31	5:33	5:38	5:41	5:52	6:05
6:01	6:03	6:08	6:11	6:21	6:33
6:31	6:33	6:37	6:40	6:50	7:00
7:01	7:03	7:07	7:10	7:20	7:30
7:31	7:33	7:37	7:40	7:50	8:00
8:01	8:03	8:07	8:10	8:20	8:30
8:31	8:33	8:37	8:40	8:50	9:00
9:01	9:03	9:07	9:10	9:20	9:30
9:31	9:33	9:36	9:39	9:48	9:57
10:01	10:03	10:06	10:09	10:18	10:27

Grossmont → La Mesa → Redwood Village

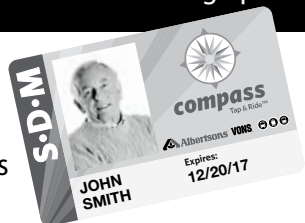
(F) Grossmont Transit Ctr. DEPART	(E) La Mesa Bl. Trolley Station	(D) University Av. & 69th St.	(C) University Av. & College Av.	(B) University Av. & 54th St.	(A) Orange Av. & 54th St. ARRIVE
6:23a	6:33a	6:40a	6:43a	6:47a	6:50a
6:53	7:03	7:10	7:13	7:17	7:20
7:22	7:33	7:40	7:44	7:48	7:52
7:52	8:03	8:10	8:14	8:18	8:22
8:20	8:31	8:38	8:42	8:46	8:50
8:49	9:01	9:08	9:12	9:17	9:21
9:19	9:31	9:38	9:42	9:47	9:51
9:49	10:01	10:08	10:12	10:17	10:21
10:17	10:30	10:38	10:43	10:48	10:52
10:47	11:00	11:08	11:13	11:18	11:22
11:17	11:30	11:38	11:43	11:48	11:52
11:47	12:00p	12:08p	12:13p	12:18p	12:22p
12:17p	12:30	12:38	12:43	12:48	12:52
12:46	1:00	1:08	1:13	1:18	1:22
1:16	1:30	1:38	1:43	1:48	1:52
1:46	2:00	2:08	2:13	2:18	2:22
2:16	2:30	2:38	2:43	2:48	2:52
2:46	3:00	3:08	3:13	3:18	3:22
3:16	3:30	3:38	3:43	3:48	3:52
3:46	4:00	4:08	4:13	4:18	4:22
4:16	4:30	4:38	4:43	4:48	4:52
4:46	5:00	5:08	5:13	5:18	5:22
5:16	5:30	5:38	5:43	5:48	5:52
5:48	6:00	6:08	6:13	6:18	6:22
6:18	6:30	6:38	6:43	6:48	6:52
6:48	7:00	7:08	7:13	7:18	7:22
7:19	7:30	7:37	7:42	7:46	7:49
7:49	8:00	8:07	8:12	8:16	8:19
8:20	8:30	8:37	8:41	8:45	8:48
8:48	8:58	9:05	9:09	9:13	9:16
9:18	9:28	9:35	9:39	9:43	9:46
9:48	9:58	10:05	10:09	10:13	10:16

S/D/M and Youth Compass Card

All riders using reduced fares must comply with one of the following options:

Option 1 (Recommended by MTS)

MTS offers a picture ID on a Compass Card to eliminate the need to carry multiple identifications for proof of eligibility.



compass card

Option 2

Riders using a standard S/D/M or Youth Compass Card or a one-way ticket must carry supporting identification to prove eligibility.



For additional benefits of **Option 1** and/or list of valid forms of ID for **Option 2** go to: sdmts.com/reduced-fares